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I

THE BALTIMORE SCHOOL SITUATION

There are those who think that the fight to free our schools from the control of politicians and other self-seekers has during the past fifteen or twenty years been finally won. Those who have observed more carefully are less sanguine, and realize that eternal vigilance is a necessary condition for maintaining an efficient system of public education under professional control. Recent developments in the city of Baltimore confirm this view.

In order to understand the situation as it has developed recently in Baltimore, it is necessary to review briefly the condition of affairs before the election of Superintendent James H. Van Sickle in 1899. In commenting upon the public schools of Baltimore in 1892, Dr. J. M. Rice characterized the Board of Education of Baltimore as

> "a purely political organization, its members being elected, one for each ward, by the members of the Common Council. But while each member of the school board is officially elected by a majority vote of the Common Council, he is—so far as I have been able to learn—practically appointed by the member of the Common Council from his own ward; that is, he is nominated by him, and the nomination rarely fails to receive the official confirmation. The Board of Education of the city of Baltimore is, therefore, a product of the ward politicians." [1]

This Board of Education was continued until the adoption of a new charter, which became effective in 1899.

[1] J. M. Rice, *The public school system of the United States*, p. 62.

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Dr. Rice speaks of the teaching force in Baltimore at this time as a body of untrained teachers.

"Of those now in the system," he says, "some are high-school graduates, others have had no high-school education, and but comparatively few have ever received any professional training whatever. Further, political influence appears to play a much greater part in their appointment than merit. Altho they are officially appointed by a majority vote of the Board of Education, the power to appoint teachers lies practically in the hands of local committees, consisting of two members, who have special charge of the schools of the two wards which they represent. . . . Now, as each member of the school board depends for his appointment on the councilman from his ward, it may readily be perceived to what extent the appointment of Baltimore's teachers lies in the hands of its ward politicians." [2]

The Commission appointed to study the system of education in the public schools of Baltimore, in the spring of 1911, comments as follows concerning the conditions prior to 1900:

"Those administrative functions which were directly or remotely connected with the building up of political influence were guarded closely by the school commissioners and kept for the most part in their own hands.

"The superintendent was relegated to the rear. He was a 'fifth wheel.' The ordinance provided that he must be a man 'of literary and scientific acquirements and of skill and experience in the art of teaching,' but his duties were limited to visitation, suggestion, and reporting. He had little real authority in the conduct of schools. Teachers and principals looked to the local committeemen, and in some cases to the chairman of a general committee, for their positions, increase in salaries, and additional supplies and textbooks. That which the superintendent accomplished was largely by 'moral suasion.' He was also by ordinance a member of the examining committee, together with three commissioners and later with the assistant superintendent. But the ordinance provided that the examinations should be conducted 'in forms prescribed by the board,' and the superintendent was powerless in preventing the passing of incompetent and poorly prepared applicants when any such persons acquired or possest the support of a commissioner who could secure the support of a majority of the committee or of the board." [3]

That political influence, rather than special training, was demanded of those who would secure positions in the schools

[2] *Ibid.*, p. 63.

[3] Report of the Commission Appointed to Study the System of Education in the Public Schools of Baltimore, p. 30, Bulletin No. 4, 1911, United States Bureau of Education.

is indicated in the list of the members of the faculties of the high schools in the report for 1899. This report gives the names of forty-eight men and women then teaching in the three high schools. Of this number, one was a Bachelor of Arts, one a Bachelor of Philosophy, four Masters of Arts, and one a Doctor of Medicine. The others, so far as indicated by the faculty list, were without degrees. The same situation existed in the Polytechnic Institute, where of a faculty of twenty, there was one graduate of the United States Naval Academy, one Bachelor of Philosophy, and one Doctor of Medicine. A man who has had unusual opportunity to observe the development of Baltimore schools during the past generation, recently declared that it was commonly considered unnecessary for one to have any training beyond high school graduation as preparation for teaching in the high school prior to 1900. The positions in the high schools were commonly filled from the elementary schools. Any one who left the school system in order to secure additional training was frowned upon by his colleagues because of the fear that even this political board might come to think of college training as essential for the high school teacher.

Something of the lack of organization in the schools is indicated by a comment in Mr. Van Sickle's first report, bearing the date of January 1, 1900. He says:

"In some of our school buildings there are four principals. In a number of buildings there are two principals. When authority is so divided there must necessarily be loss in unity of effort. A class entering the primary school should be under the supervision of the same principal thru the eight years of the elementary course."[4]

In commenting upon this system, the Commission appointed to study the system of public education in Baltimore says that these

"principals exercised only nominal control over the few teachers in their school or division. They were principals in name rather than in fact. In some instances there was duplication of work in the same building and, altho a uniform course of study was in existence, there was little of real organized unity. . . . For a long time the high schools

[4] Report of the Public School Commissioners, Baltimore, 1900.

examined the pupils coming from the elementary schools to see if they were prepared for high school instruction." [5]

The city charter which went into effect in 1899 provided for a board of school commissioners composed of nine members serving for six years without pay, three being appointed every second year. The first board appointed under the new charter was one of the best boards of education that have ever had charge of public schools in an American city. The president of the Board, Joseph Packard, an eminent lawyer and later president of a charter revision commission, served in this capacity for eight years. Among his colleagues were President Daniel Coit Gilman; Thomas S. Baer, who later resigned to become judge of the supreme bench of Baltimore; Dr. William Rosenau, rabbi of the largest synagogue in the city and instructor in the Johns Hopkins University; and a former mayor of the city. After consulting the late William T. Harris, then United States Commissioner of Education; President Nicholas Murray Butler of Columbia University; President Charles W. Eliot of Harvard University; and other distinguished authorities, the new Board selected James H. Van Sickle of Denver as Superintendent.

The fight on the new régime began immediately. An injunction restraining the Board from paying the salary of the Superintendent was secured from the Circuit Court on the ground that the Superintendent of Schools was a city officer, and therefore, under the charter, must be a voter. There were those who were more concerned that the position should go to a Baltimorean than that the city should have the best it could buy for the money at its disposal. President Packard defended the action of the Board, showing the absurdity of the claim that the Superintendent of Public Instruction should be classified as a city officer, and he was sustained by the Court of Appeals.

The new Board of Education made the superintendent the chief executive officer of the Board, and authorized him to

[5] Report of the Commission Appointed to Study the System of Education in the Public Schools of Baltimore, p. 48-49.

assign and transfer all teachers, to define their duties, to call meetings whenever he deemed them necessary, and to regulate by orders, written or otherwise, the operation of the school system in any manner not inconsistent with the rules adopted by the Board. By charter provision the Board of Superintendents had been given the ordinary duties of such officers, namely, the examination of teachers and their nomination to the school commissioners for appointment or promotion; supervision and inspection; reports; advising the Board with respect to courses of study, textbooks, and methods of instruction.

Among the early policies which were carried out by the new Board of Superintendents were the reorganization of the high school courses of study; the elimination of about sixty teachers who were wholly unfit to give instruction in the schools; the organization of a city training school for teachers, with the requirement that those who would teach in the elementary schools must have had a course in the training school, or its equivalent, in addition to their high school graduation; and the organization of a system of supervision which eliminated the many so-called principals of the old system and substituted group principals, who supervised the work in several buildings together with vice-principals who had charge of single buildings. This attempt to

"place the administration of the schools of Baltimore on a strictly professional basis, to ignore all the old considerations of 'pull,' to effect a real organization with a complete system of graduated responsibility; in a word, to build up an efficient, modern school system, was a huge and trying task. All the forces of conservatism, of reaction, of political influence, of self-interest, were arrayed in opposition. The unpleasant things that had to be done, the mistakes that were as a matter of course committed, afforded points of attack. Other means failing, bills were brought forward at one session after another of the State legislature, for the purpose of demolishing the new system and substituting a large board elected by wards.

"The power of enlightened public opinion was great enough to defeat all these destructive efforts, and after five or six years a period of quiet ensued. During the earlier time of struggle, the standard of the board's membership was maintained, and the board stood as a unit behind the policies of the administration; by no means making itself a mere organ to register the desires of the superintendent, but showing much wisdom

in its attitude and heartily supporting all the large and vital things for which the administration stood. Then, after these several years of quiet, a few appointments were made which marked a distinct deterioration in the former standards of membership for the board, and thus the nucleus was established which in time led to the formation of an anti-administration faction in the board." [6]

The formation of this opposition faction had momentous consequences. From the very beginning there had been opposition on the part of the more conservative part of the teaching force to the policies of the new administration, which showed itself in criticism of certain features of the new organization, the new courses of study, and the new methods of teaching. An equally potent factor was the influence of a small group of men and women, including principals and teachers, who found their own personal ambitions thwarted under the new order of affairs. However, the high character and ability of the school commissioners and the single-minded devotion to the public interest which characterized both the School Board and the Board of Superintendents had at last, it seemed, won the day; but the rift within the School Board itself was the starting point for re-opening the whole question.

A hostile faction within the Board, numerically strong, naturally encouraged mutinous feeling and conduct within the school system. Indeed, it has been persistently charged that the reactionary members of the Board actually encouraged and incited disloyalty in the school system. The group of agitators became active, and the school system was again torn by squabbles concerning questions of professional recognition, in particular whether appointments should be made, textbooks adopted, and the course of study altered by the Board of Education acting merely on the opinions of its own members, or whether the expert advice and counsel of the Board of Superintendents should be asked and considered before a vote was taken. Five members of the Board stood firmly for the latter procedure; four members with equal determination fought for the former method. The opposition of the teaching force at this time, ignoring all the older subjects of

[6] Editorial—*Atlantic educational journal,* May, 1910, p. 20.

criticism, focused itself on the promotional examinations. The plan for advance in salary in force at the time provided for an automatic increase for three years. If during that time the teacher's work was "good," a further advance in salary was made possible by his passing a promotional examination. This examination consisted of two parts. In the rules of the Board this examination is defined as follows:

"The promotional examination, Part I, shall consist of (a) the teacher's efficiency record, which must not be lower than 'good,' as determined by inspection of regular class work by the respective principals and the superintendent, together with (b) an impersonal test of the correct and effective use and interpretation of English, which test shall be decided by a committee of three, which shall consist of the superintendent and two other members selected by him.

"The promotional examination, Part II, shall consist of (a) a written report of the working out of some problem of teaching, or of the study of a particular group of children; (b) such a defense of the report before a board of examiners, consisting of the superintendent and two other members selected by him, as will evince familiarity with educational literature bearing on the problem or study; and, when required, (c) a classroom demonstration before a board similarly composed."[7]

So intense became the feeling that nearly every Board meeting was marked by violence and bitter language, and the press demanded that the mayor find some way to bring about a better condition of affairs. At this point (February, 1910) a crisis was reached with the expiration of the terms of three commissioners, one of whom was a bitter opponent of the administration and two its strong supporters. The Public School Teachers' Association past resolutions asking for the reappointment of the opposition member.[8]

Another powerful influence which is said to have made itself felt at this time was that of the local agent of one of the largest and most powerful of the textbook publishers. The man in question is commonly recognized as a politician of

[7] Baltimore School Report, 1905, p. 34.

[8] It should be explained that this association has been regarded from the first as hostile to the administration, a judgment which is confirmed by the fact that its president has been by common consent of both sides regarded as the leader of opposition within the system.

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great influence, has been a member of the State legislature, and is consulted by the most powerful political leaders in the city and State. This agent had expressed bitter resentment against Superintendent Van Sickle for alleged bad treatment he had received, which had resulted in a very large falling off of his business in Baltimore. After the enmity of the book agent had been declared, the opposition within the school system, which had never been able to enlist any very active support from the politicians, suddenly became effective. Mayor Mahool (compromising for the first and only time) nominated for reappointment all three of the commissioners, whose terms were expiring; the Council promptly confirmed the reactionary and rejected the two progressives. There now ensued a prolonged struggle, the details of which it would be tedious to record. Twice at intervals of several weeks the mayor sent to the Council the names of new commissioners, men and women of education, ability, and high standing in the community, the Council rejecting them all. The excitement in the school system was intense. President Semmes and other members of the majority offered to resign if the opposition would do so or if the mayor desired. This proposition was steadfastly declined by the minority, who not only held out stubbornly, but refused to formulate the policies for which they stood. Their leader absolutely refused to make a public statement.

Meanwhile, the more progressive element of the teaching corps were earnestly supporting the administration. At a conference of public school teachers and principals, held on April 18, 1910, with an attendance of about 350 teachers, the following resolutions were past:

"*Be it resolved* by this Conference of public school teachers and principals, that we advocate unequivocally a school system for Baltimore administered on modern, progressive lines, free from political influence, and representing the most approved professional ideals and practises; that, in our judgment, the present school system of Baltimore represents the professional principles which now prevail in city school systems thruout the entire country; that the system, on the whole, meets with our sincere and cordial endorsement; that we as teachers have no desire to bring about the destruction of the present efficient school system and the

adoption of reactionary policies, either for the purpose of lessening our own duties, or for any other reason." [9]

On February 11, 1910, The Educational Society of Baltimore (an organization composed of members from the public and private schools, the colleges and universities, and men and women prominent in the civic life of Baltimore) adopted a set of resolutions including the following statement: "That this society regards the present administration as representing a high degree of efficiency, professionally administered, conducted upon the basis of merit, and free from political influence." Finally the public protest became so vehement that the Council yielded to Mayor Mahool's firm policy and confirmed three new commissioners (one member of the opposition having suddenly resigned for personal reasons).

The three new members were all college graduates and men of exceptional ability and civic spirit: General Lawrason Riggs, a graduate of Princeton, who had been for many years Brigadier General in command of the Maryland National Guard; Dr. Hans Froelicher, a graduate of the University of Zurich, a professor in Goucher College; and Mr. Charles F. Harley, a prominent lawyer. All declared that they accepted the positions free of pledges and with open minds. After a study of the situation they gave hearty support to the administration. The alignment in the Board was now six to three, and the minority continued its violent opposition. In the meantime, the Elementary Teachers' Association had been organized with a membership of more than 1,000 for the purpose of securing an increase of salary and of opposing promotional examinations. A number of those who joined the organization stated that they felt no disloyalty toward the administration. The officers of the association, however, included several teachers who were known to be strongly hostile. The School Board was a unit in favor of higher salaries, recognizing that the scale in Baltimore is one of

[9] To make clear the significance of this resolution, it should be stated that there are about 1,750 teachers and principals in the school system, and that it required some courage at this juncture to state one's position publicly.

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the lowest in any important city in the country; but the majority would not agree to abandon promotional examinations, and referred the subject to a committee for further study. When the request of the School Board for money to increase salaries came before the Board of Estimates, the officers of the Elementary Teachers' Association let it be known that they would not ask for an increase unless assured that the School Board would abandon promotional examinations. The Board of Estimates, anxious to keep the tax rate down to the lowest possible figure, seized the opportunity to deny the appropriation on the ground that no increase should be voted to the teachers while their representatives maintained such an attitude. The net result of the policy of the officers of the Elementary Teachers' Association was to prevent a general salary increase, a substantial part of which was to be automatic, while, of course, the promotional examinations remained in force.

At a meeting of the School Board in November, a member spoke slurringly of Superintendent Van Sickle, and was promptly challenged to prefer charges. This he did, and a trial before a committee of the Board followed. The charges proved to be trivial [10] and were not sustained. The newspapers were severe in commenting upon the puerility of the proceeding.

About the same time the long struggle came to a crisis in a trial before the mayor of the city. The president of the Elementary Teachers' Association had been sharply called to account for giving out an interview which the School Board considered disrespectful and insubordinate. In this connection the leader of the reactionaries in the Board made a public statement regarding the proceedings of a private session, the purport of which six of his colleagues united in denying. President Semmes promptly preferred charges and demanded this member's removal, charging him with violating the con-

[10] It was charged that the superintendent had been careless about furnishing information requested by a commissioner, that he had refused to give several teachers their ratings upon request, and that there was a discrepancy between two circulars issued at intervals of nine years.

fidence of the Board and making false statements; with having threatened to antagonize Superintendent Van Sickle on every point and drive him out of town, even tho it wrecked the whole school system; with having stirred up dissatisfaction among the teachers and instigated them to be insubordinate; with having persistently done all he could to nullify the provisions of the Compulsory Education Law; with having so repeatedly failed as a member of committees to carry out the Board's instructions that he had to be removed from committees; with having advocated the promotion of teachers whom he had himself declared inefficient and insubordinate; and in general, with exercising a disturbing and disorganizing influence in the Board and in the school system. It would be impossible within the limits of this article to reproduce the evidence given at the trial before Mayor Mahool. A careful reading of the entire testimony, however, tends to convince the reader of the validity of the charges preferred by Mr. Semmes. One witness, a former member of the Board and a prominent clergyman, testified that the member on trial had used the following language: "I have made up my mind to make that man's (Superintendent Van Sickle's) life a living hell, and I am going to get him out of the city if I have to marshal the entire teaching force against him." This particular sentence is noted because of the light it seems to throw on the conditions in the teaching force, both before and after the trial.

When all the testimony had been submitted for the prosecution, the attorney for the accused member proposed that, instead of going on with the trial, both his client and President Semmes should resign in order to restore harmony in the Board. Mr. Semmes accepted the proposal, and the hearings were immediately concluded. The mayor thereupon designated General Lawrason Riggs as President of the Board, and appointed to the vacancies Mr. Eli Frank, a professor in the Law School of the University of Maryland and President of the Federated Jewish Charities; and Dr. J. M. T. Finney, a professor in the Johns Hopkins Medical School, a surgeon of national reputation, a trustee of Princeton University, and a man noted for his quiet but effective support

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of all movements for social and civic progress in the community. President Riggs, in assuming his new duties, showed great tact; and within a few weeks there ensued a condition of harmony in the School Board such as had been unknown for years. Two of the nine members still refused to approve of Superintendent Van Sickle's administration, but there were no more unseemly wrangles and very few divided votes.

One of the first acts of the reconstructed Board was to pass an order to "employ a commission of three disinterested, competent persons to investigate and report upon the system of instruction now in force in the public schools of Baltimore city." Dr. Elmer E. Brown, United States Commissioner of Education, was chosen as the chairman of the commission. In consultation with members of the Board, Dr. Brown chose Professor Ellwood P. Cubberley of Leland Stanford University to serve as a second member of this commission. Dr. Brown and Professor Cubberley united in choosing Mr. Calvin N. Kendall, Superintendent of Schools of the city of Indianapolis, as the third member of the commission. Mr. Milo B. Hillegas and Dr. Harlan Updegraff, of the Bureau of Education, acted as assistants to the commission.

Meanwhile, an election had been held in May for the choice of a mayor and other city officials. Mr. James H. Preston, the Democratic nominee, declared that if elected he would "popularize the schools." He made a personal attack on Dr. Finney of the School Board, he openly admitted his friendship for the local party boss, and declared that he was proud of it. It was soon commonly reported that the mutinous element among the teachers had agreed to support Mr. Preston on condition that, if elected, he would bring about the removal of Superintendent Van Sickle, and that the politicians, after an interval of eleven years, would regain control of the schools. It was also freely charged that the book agent previously referred to was cooperating with the rebellious element in the school system. On the other hand, the Republican candidate, Mr. Timanus, had, during the previous administration, made the very appointments to the School Board which caused the first break and led to the disastrous fight for control. The

friends of a clean and progressive administration of the schools were therefore divided in opinion and divided their votes. Mr. Preston was elected by the narrow majority of seven hundred.

A few weeks after his inauguration, Mayor Preston, without waiting for the report of the Commission of experts, summoned the School Board to his office and asked for the immediate removal of Superintendent Van Sickle, on the ground that this action was necessary to "restore harmony" in the school system. Owing to the disturbed conditions, three of Mayor Mahool's appointees had been in office less than six months, and under the charter were removable by Mayor Preston. This accident gave the mayor an opportunity to enforce compliance with his wishes in a way that would have been quite impossible under normal conditions, for the three new appointees, if they combined with the two opposition members, would give the mayor control by a vote of five to four. Mayor Preston, finding that he could not coerce the majority members to do his bidding, removed Dr. Finney, Mr. Frank, and Dr. Rowland. The nature of the demand made by the mayor, and the attitude of the commissioners, are best understood from the answer of the three commissioners, which is as follows:

"JAMES H. PRESTON, *Mayor of Baltimore City:*

"*Sir*—On Wednesday, June 14, 1911, at 3 o'clock P.M., at your request, the members of the Board of School Commissioners, with the exception of Dr. J. M. H. Rowland, who was out of town, met at your office in the City Hall.

"At this meeting you stated that you had found considerable unrest and discontent among a large number of parents of the pupils who had been influenced by the dissatisfied teachers. That this unrest and dissatisfaction, in your opinion, were due entirely to the temperamental qualities of the present Superintendent of Public Instruction, Mr. James H. Van Sickle; that from your personal experience you knew that the present condition of the schools is far superior to that which obtained a number of years ago, when you first came to Baltimore; that you would be willing to concede that this improvement in large part is due to Mr. Van Sickle's efforts and that he is a capable and conscientious superintendent, but that whether rightly or wrongly, a large number of teachers seen by you, estimated at more than a thousand, have lost confidence in the fairness and good faith of Mr. Van Sickle, and are in a state bordering on revolt.

"That, in your judgment, the trouble with the 'probation' (by which we understand you to mean 'promotional') examinations is not that they are difficult, or that the teachers are opposed to them, so much as that they have no belief in Mr. Van Sickle's fairness; that you were willing to concede that they might be entirely wrong in this regard, and that there might be no basis for their lack of confidence, but that, nevertheless, 'it is a condition and not a theory that confronts us,' and that, in your judgment, the welfare of the schools requires the displacement of Mr. Van Sickle at the close of the school term; that you have no person in mind for his successor, but that he should be a Baltimorean; that you are opposed to any politics in the public schools, but are determined to have harmony.

"You requested us either to secure Mr. Van Sickle's resignation or to dismiss him from the office of Superintendent prior to the beginning of the next school term. As you had stated that Mr. Van Sickle's presence in the school system made harmony impossible and that you were determined to have harmony, we draw the inference that you are determined to bring about the removal of Mr. Van Sickle. It was suggested to you that our answer to your statement might properly be delayed until the receipt of the report of the commission which has made a thoro study of our school system and which report is expected during the next few days. But you replied that you did not consider that this report had any bearing on the case. Six of the eight members of the board present at the meeting concur that the aforegoing represents substantially what you there said. We are unable to reproduce verbatim what took place, because, altho the proceedings were recorded stenographically by your stenographer, you declined to furnish us with a copy thereof.

"The conference in question was the first had by you since your election with any member of the board with reference to school matters, and at this conference we were not asked whether in our opinion the condition described by you actually obtains, and if so, what, in our judgment, might be the reason for it; nor if we did find some such condition to obtain, whether we had any plans in contemplation to correct it.

"By Section 100 of the City Charter it is provided:

"'It (the board) shall appoint a Superintendent of Public Instruction and one or more Assistant Superintendents of Public Instruction, one of whom shall be the first assistant and shall act as Superintendent of Public Instruction if that officer is disabled. The said superintendents shall be persons of education and experience in the management of schools, and they shall be not less than 25 years of age at the time of their appointment and shall discharge the duties herein prescribed, and such other duties as the board may direct.'

"Section 99 of the Charter, among other things, provides:

"'All officers, secretaries, clerks, and employees shall be appointed by said board and may be removed by it at its pleasure.'

"These sections of the Charter clearly confer full power and impose sole responsibility upon the Board of School Commissioners in the employment, retention, and discharge of the Superintendent. It seems to

us absolutely clear that this responsibility can not be met by complying with any demands that may be made upon us, unless we ourselves have been satisfied that the action demanded is a right and proper one.

"The undersigned are three members of the board who have been in office less than six months; one of us less than two months. During the respective periods of our tenure we have diligently and faithfully devoted ourselves to the duties of the office, and have attempted to inform ourselves as to the merits and defects existing in the present system of public instruction. We have been anxiously awaiting the report of the distinguished educational authorities who have investigated this system, and have kept our minds open on many important questions, awaiting the advice shortly to be received from so authoritative a source. You have told us, however, that we must act without regard to this report, and we are now asked, without any investigation on our own part (indeed by the shortness of the time allowed and your suggestion of secrecy there can be no such thing as an investigation), to accept your statement as to the condition of affairs and its causes.

"We are ready and willing to hear any charges that may be made against the Superintendent of Public Instruction, but we respectfully but firmly insist that we will take no action based upon the mere statement made by any individual, however high in authority, unless supported by proof, and unless an opportunity shall be afforded to the party charged to be heard in his own defense. Any other course is not only opposed to the most fundamental principles of decency and justice, but would involve on our part a surrender of personal responsibility and judgment in a matter intrusted by law solely to the Board of School Commissioners; and in our opinion no conscientious and self-respecting man can legally or morally abdicate his responsibility in so flagrant a manner. Very respectfully yours,

"JOHN M. T. FINNEY,
J. M. H. ROWLAND,
ELI FRANK."

On the very eve of the mayor's final order, the report of the Commission of experts headed by United States Commissioner Brown was made public, and was found to sustain Superintendent Van Sickle's administration in all important respects. It contained recommendations for further development along lines already begun, and some rather severe comments on part of the teaching force of the city.

Mayor Preston's summary action was the subject of earnest protest, all the more emphatic because of the commission's report, from all the independent newspapers of the city, and from a number of its leading men and women. According to the news reports a large number of citizens who were

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approached by the mayor or his representatives absolutely refused to serve on the Board under the existing circumstances. Three men were found, however, who were apparently willing to do what the mayor desired. In the face of a petition signed by hundreds of business and professional men and strong protests from the Reform League and other civic organizations, the remodeled Board at its first meeting summarily removed Superintendent Van Sickle by vote of five to four, without charges, without trial, and without assigning reasons—the only comment of the new members being, "We are ready to vote." Mr. Van Sickle's attitude in this crisis is set forth in the following statement given to the press at the time:

". . . I came to Baltimore eleven years ago to aid in carrying into effect a new system of school administration to be inaugurated under the new charter. The School Board that had just gone into office contemplated the creation of something radically different from the old order of things, for, in spite of the continual presence of some excellent citizens upon former School Boards, the weaknesses of the old system were well known to everybody.

"I regarded the invitation I received from the Baltimore School Board of 1900, headed by Joseph Packard, as an invitation to assume a great public trust by acting as the executive officer of a municipal reform movement of the highest importance. From that date to the present moment I have never swerved from this conception of my position and the work I had to do. During this decade I have become so fully identified with life in Baltimore, I have become so thoroly at home here, and I have gained such an intimate knowledge of the educational needs of this community that I venture to consider myself better equipped today than at any time in the past to continue to hold the trust that has been reposed in me.

"In my work as Superinendent of Schools I have continuously had the support of those elements of the community responsible for the progressive movement that brought about the new educational regime. There have been at times reactionary movements, and these influences have got a footing within the teaching force and in the School Board itself; but at no time have I been made to feel that the elements of Baltimore's citizenship standing for the maintenance of the school reforms that have been established desired that I should cease to represent them in this work. In fact, as the terms of successive board members have expired I have witnessed the accession to the board of a number of men who, one after another, assumed their positions with distinct inclinations against the new system, but who, by giving me a fair hearing and judging questions upon their merits, became ardent supporters of all the main features of the new régime.

"From my view, therefore, of the situation in which I now find myself, I should regard a resignation on my part in the light of a desertion of trust. I am at the present time, just as I have been at any time for the last eleven years, subject to the action of the Board of School Commissioners. It is within their province to dismiss me by vote at once or at any time in the future, as they might have dismissed me in the past. I see no reason at this time for casting off of my own volition the grave responsibilities I have assumed.

"JAMES H. VAN SICKLE."

June 29, 1911.

Before the deposed superintendent's dismissal had taken effect, he was appointed to the superintendency of Springfield, Mass., at the same salary paid him in Baltimore.

Members of the new majority made it known that the Board would limit its search for a new superintendent to the State of Maryland, and preferably to the city of Baltimore. At one time it seemed that the position would be offered to Superintendent Albert S. Cook of Baltimore County, one of the ablest and best-known educators of the State; but Mr. Cook made it plain that he would not accept the position if insubordinates in the system were to be rewarded, or unless a strictly professional administration of the schools was to be followed. These conditions were evidently not acceptable. The majority members of the Board finally elected as Superintendent Mr. Francis A. Soper, principal of the City College (the boys' high school), who had been connected with this high school as teacher or principal for about thirty years.

At a later meeting, in the absence of the newly chosen superintendent, and without consulting him or any of his assistants, the School Board majority, against the earnest protest of the remaining progressives, acted as follows: (1) They reduced First Assistant Superintendent Henry A. Wise to the position of group principal (reducing also a group principal to make place for him), and elected as his successor the president of the Public School Teachers' Association, a man generally regarded as the leader of the opposition to Mr. Van Sickle's administration, several times before the Board for insubordination, an opponent of charter changes guaranteeing a professional administration of the schools, a man

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without collegiate or professional training, whom the Baltimore *News* had previously declared editorially to be "unfit to be connected with the schools in a responsible position;" (2) after having elected as principal of the City College an instructor in that institution, they repealed a rule of the Board requiring that vice-principals in the high schools be designated on the nomination of the principal, and elected as vice-principal a well-known opponent of the former administration, who several years before had been removed from the vice-principalship of another high school in the city because of insubordinate conduct; (3) they elected the President of the Elementary Teachers' Association, a woman who had been twice reprimanded for insubordination (the second time by the reconstituted Board itself) to the position of vice-principal.

This action of the majority members resulted within a few days in the resignation of the remaining progressives of the old Board, who felt that their usefulness was now at an end. Their attitude is best exprest in their own words:

"Baltimore, Sept. 7, 1911.

"*His Honor the Mayor of Baltimore City:*

"*Sir*—At the meeting of the Board of School Commissioners held on August 31 several changes of vital importance to the service were made. These changes were made without consultation with or knowledge of the recently elected Superintendent of Public Instruction or any member of the Board of Superintendents. Three of the five Commissioners who voted for these changes have served barely two months, during which period the schools have been closed and the teachers scattered.

"Consequently, the promotions and demotions then made were without the advice and counsel of the only persons whose knowledge and experience fitted them to pass upon the relative merits of the members of the teaching force, and without the possibility of personal investigation by individual members of the Board of School Commissioners.

"Such actions violate the fundamental principles on which a public school system should be conducted, the principles of respect for constituted authority, respect for expert opinion, and recognition of merit alone in promotions.

"In a truly deliberative body, as the School Board has heretofore been, a minority, however small, may serve a useful purpose. But the Board as recognized by you has ceased to be a deliberative body. Actions of most vital importance to the schools are determined upon, if not dictated, outside the Board, and at the open meetings the majority persistently refuse to discuss or defend. Believing that the possibility has

past for us to render further public service as members of the Board of School Commissioners of Baltimore City, we tender our resignations therefrom, to take effect immediately. Very respectfully,

"LAWRASON RIGGS,
ROBERT M. ROTHER,
HANS FROELICHER."

To this communication Mayor Preston replied in vigorous language, charging these gentlemen with a desire to be dictatorial, and declaring that in tendering their resignations they had performed a public service.

Another consequence of the changes referred to was the prompt resignation of Dr. Henry S. West, assistant to the superintendent, who was really second in authority under Superintendent Van Sickle. Dr. West states the reasons for his resignation in the following extracts from a letter which was made public at the time:

"The manner in which the majority of the School Board transacted important professional business at the meeting of August 31 was so directly contrary to what I regard as the sound principles of public school administration for the good of pupils, teachers, citizens, and all that I chose to register my individual protest by resigning from the Baltimore public schools immediately.

"I protest against the utter and astonishing contempt that the School Board majority have shown toward their own newly elected Superintendent. I protest against the humiliating treatment that has been meted out to Professor Henry A. Wise. I protest against the unceremonious and undeserved demotion of former Group Principal Jacob Grape. I protest against the promotion of Miss Laura W. Mainster within one week of the act of administering to her a reprimand for unprofessional conduct. I protest against the foisting of Mr. Richard H. Uhrbrock as vice-principal upon the newly appointed principal of the City College.

"I protest against the selection of Mr. Charles J. Koch for elevation to the first assistant superintendency, and in particular against his being placed in a position superior to so faithful and worthy a man as Dr. Charles A. A. J. Miller, because, from the point of view of good school administration, Mr. Koch is just about the last man in the service who should have been promoted in this memorable year of Baltimore's school history. Furthermore, I have no hesitation in giving it as my professional opinion that Mr. Koch is utterly unworthy to be a participant in the intimate professional deliberations of the board of superintendents.

"I will also say I am absolutely certain that this professional protest of mine expresses the sentiments of hundreds of the good men and women in the school service, who, of course, can not speak for themselves while remaining under this remarkable School Board. These teachers foresee

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that there has been inaugurated a régime in which one need only 'look good' to certain School Commissioners in order to get appointments and promotions and escape removal for inefficiency, negligence, or insubordination, and all right-minded people know how devious are the ways of making oneself 'look good' to School Commissioners when the Superintendent of Instruction has been shorn of all power.

"Henceforth progressiveness, professional attitude, scholarly equipment, and self-improvement will all count for little or nothing beside the 'pull' with the Commissioner and the pull with any Mayor who is intent upon rewarding political services rendered.

"Superintendent and principals alike will now see themselves held in contempt by those teachers who 'stand in' with the ruling five members. In order to symbolize properly what has taken place in our public school affairs since the expulsion of Dr. Finney, Dr. Rowland, and Mr. Frank from the School Board the school administration offices ought to be at once moved back into the City Hall, where they were located for so many years.

"The summary dismissal of former Superintendent Van Sickle without even the pretense of an equitable proceeding was deplorable enough as a civic scandal, and the people of Springfield, Mass., with characteristic energy and promptness, were quick to take advantage of Baltimore's folly. But these latter doings of the present majority of the School Board indicate that under the dominant radical leadership our public schools are to be swept back into a condition of educational medievalism."

The minutes and newspaper accounts of the subsequent Board meetings, indeed, indicate that the new Board, which now contains seven of Mayor Preston's appointees and the two former members of the opposition, is likely to continue as it began. The new members do not hesitate to make nominations for teachers and elect them without regard to the advice of the Board of Superintendents. Several questionable appointments have already been made. As an example of the mode of transacting business, reference may be made to one of the commissioners who at a recent meeting remarked, upon looking over a list of applicants for a high school position, "My daughter knows Miss ——— and says she is a good teacher. I move that she be elected." It is never pleasant to make personal comparisons; but in order to indicate clearly the nature of the change that has been wrought in the personnel of the School Board, it is appropriate to recall that the Board has numbered among its members in the past such men as President Gilman, President Remsen, Mr. Joseph Packard, Rabbi Rosenau, General Riggs, Dr. Finney, and

others of the same type. It would be difficult to convince any citizen of Baltimore that the School Board is now composed of men of like standing.

At this writing it is impossible to predict the outcome. The new Board and its policies are being strongly condemned in the independent press of the city. Gross election frauds now under investigation by the Grand Jury have given rise to widespread question concerning the correctness of the returns on the face of which Mr. Preston was shown to have been elected mayor. A movement which seems to have strong popular backing is on foot, to have the legislature remove the entire city administration and inaugurate the commission form of government. Whatever may come of this agitation, it seems certain, if one may judge from the present state of public feeling, that the conditions at present prevailing in the school system will not be quietly accepted by the citizens of Baltimore.

GEORGE DRAYTON STRAYER

TEACHERS COLLEGE
COLUMBIA UNIVERSITY

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II

CONTRIBUTIONS TO THE HISTORY OF AMERICAN TEACHING (VII) [1]

The first school I was sent to—I was five years old—was kept by two or three pleasant young women in a small house on Bowdoin Street, Boston, within five minutes walk of my home on Beacon Street. On my way I had but one street to cross, a steep and therefore little-frequented street on Beacon Hill; so I could come and go alone. It was a school for both boys and girls, and nothing was taught in it but spelling, reading, writing, and arithmetic, with a little geography. Pestalozzi's ideas had not penetrated to Boston; and no training of eye or hand was attempted. The discipline and manners of the school were ordinarily gentle; but I remember two disorderly and uncivil boys who occasionally got whipt in private. The little house was not well adapted to school uses, and the only places for the children to play during recesses were the brick sidewalk and the graveled street. Since there was nothing in the school work which could possibly interest a natural small boy, I never enjoyed going to this school, and every day should distinctly have preferred to stay at home.

When I was eight years old I was transferred to a school for boys which was kept in the basement of Park Street Church, the room being more than half underground, as it is today. The schoolroom was heated by a tall, sheet-iron, coal-burning stove, and there were no means of ventilation except the small windows, which on the outside were just above the sidewalk. The master was a minister who had been compelled by ill health to give up preaching, and had been assisted by college friends to start a private school for boys

[1] Earlier papers in this series appeared in the EDUCATIONAL REVIEW for September and December, 1909, January, March, June, and September, 1910.

of from eight to twelve years of age. He was a kindly, sad-looking, conscientious man in middle life, who tried hard to make his boys faithful and industrious, and to induce them to learn their lessons in spelling, grammar, and arithmetic with accuracy and thoroness. He availed himself of emulation and competition among his pupils, especially in spelling and mental arithmetic, by conducting the recitations as if they were matches, with distinction for the winner. Having a good literary sense himself, he wanted his pupils to read works which seemed to him to have literary merit; but the selections he made were extraordinary. For instance, I remember that he used for many weeks Pope's *Essay on man* as reading-matter for boys of from eight to ten years of age; and every line or sentence had to be parsed. At this school I began Latin, committing to memory a sensible primer in which the rules of grammar were well illustrated by short sentences. In the entire program of the school there was no subject which trained the powers of observation or of reasoning; but the memory was strongly cultivated, together with the power to discriminate among the different meanings of the same word, the different parts of speech, and the different moods and tenses. I do not remember that I enjoyed any study in this school, or any part of the school life except the daily long recess. Then, as now, Park Street Church stood next the Common; so we boys had a capital playground just across the street. For twenty minutes we carried on in their several seasons all the field sports then known (baseball and football had not been invented), and we added walking and running races on the brick sidewalk round the Common, the distance being about a mile and a fifth. Snowballing, hop-scotch, tag, and marbles were then allowed at the corner of Park and Tremont Streets, where they are now suppressed; and every boy who went to that school has remembered with hearty satisfaction the long recess and the ten minutes of waiting on the Common before school opened.

The sentiments of most of the boys towards their teacher were decidedly mixt. They felt respect for his attainments and his character, and a kind of compassion not unmixt with

contempt for his physical weakness and incapacity. Had they not seen him trying in vain to give an effective whipping to some of the larger and more riotous boys? Had they not seen him, faint and weak, staggering from desk to desk, white in the face, trying to reach an old lounge at the head of the room? Had they not often seen him lose patience at the stupidity or inattention of boys who did not know their lessons and made no effort to conceal the fact? On the other hand, they knew by instinct that he was always trying to do his duty, not joyfully, but with assiduity and resignation; and they believed that his learning was unfathomable. It was the boy who was oftenest whipt who was the first to get into the street and call for help when the teacher fell in a swoon on the lounge—possibly because that was the boy who had the greatest vitality and enterprise.

It was with considerable awe and no little regret that I heard in the summer of 1844 that I was to go the next year to the Boston Public Latin School, for the admission examinations of which I had been well prepared at the Park Street school. The Latin school building was remote from the Common, and had only a small bricked yard about it. Moreover, its position on Bedford Street seemed to Beacon Hill boys decidedly dangerous. Was there not a large grammar school in Mason Street, near which the boys from Beacon Hill had to pass four times a day? Now there was chronic war between grammar school boys and Latin school boys. Accordingly, the Latin school boys coming from Beacon Hill took pains to get together in a considerable group before they approached the end of Mason Street on West Street.

In 1844 the Latin school had just been transferred from its old building on School Street to the new building on Bedford Street. The rooms in it were warmed by hot-air furnaces, then lately invented; and a wooden duct had been placed in each room to provide an exit near the top of the room for the hot, foul air. As these wooden ducts were not actuated in any way, the air of the rooms never hurried out of the ducts. I remember seeing my father, who had recently been mayor of Boston and a member of the school committee,

testing the ventilation in the rooms of the Latin school by holding a light handkerchief in front of the ventilating exits. The handkerchief displayed no tendency to enter the tubes.

There were ordinarily two sessions of the Latin school, one in the morning and one in the afternoon, the interval between the two being usually two hours. As my family dined at quarter before two, and I was obliged to leave home at quarter past two in order to be punctual at the afternoon session, my dinner was a hasty one four days in the week. In the winter, the only times for play in the open air were between half-past twelve and half-past one every day, and on Wednesday and Saturday afternoons. Sunday was not then, as now, a day for recreation. It was improper to run in the street on Sunday, or to whistle. Church was attended both morning and afternoon; so that my most cheerful moments on Sunday were during the family singing of hymns and anthems in the evening, and certain short periods of illegitimate reading in the library or other retired spot, when Scott, Dickens, and Cooper could be clandestinely enjoyed.

During the first three years in the Boston Latin School I was quite unable to take pleasure in any of the studies there pursued, with the possible exception of declamation, in which I excelled. The greater part of my time during the first year in the school was consumed in committing to memory a large Latin grammar (Andrews and Stoddard's). The grammar was not enlivened with the translation of Latin sentences into English, or of English sentences into Latin, except in the specimen or sample phrases; so that learning it by heart was the blankest kind of unintelligent labor. Repetition made the work duller still; for there were frequent reviews, intended to prevent the boys from forgetting the earlier passages as fast as they advanced thru the later. This study amounted to nothing but practise in committing to memory, often without any real comprehension of the rules and paradigms committed. Thus, in my eleventh year I committed long lists of exceptions under the head of prepositions and adverbs and in prosody, but never understood until my fifteenth year how to use these lists. In my eleventh year also I committed a considerable number

of rules of syntax about moods and tenses, the gerunds, and the ablative absolute, but never understood what these rules really meant until after I went to college, altho I could recognize the constructions to which the rules referred and repeat the appropriate rule glibly. English was taught in the school only thru translating Latin and Greek into English, except that we had a few exercises in declamation and English composition. Near the end of my third year in the Latin school, when I was thirteen years old, I won against several older competitors the first prize for declamation at the great Exhibition Day of the school, using a selection from a fiery speech by Daniel O'Connell in the House of Commons. I still remember a good deal of the selection. It must have been amusing and possibly pathetic to see a little American boy announcing to an audience of a thousand people or more, "I do not rise to fawn or cringe to this house. I do not rise to supplicate you to be merciful to the people to whom I belong;" and at the end declaring with lofty indignation, "I have opposed this measure thruout, and I now protest against it as harsh, vindictive, uncalled for, and unjust, as establishing an infamous precedent by retaliating crime against crime, as tyrannous, cruelly and vindictively tyrannous." No attempt whatever was made to familiarize us with English literature; and no modern language was taught in the school. Arithmetic was overdone, too much time being given to arithmetical problems which often related to currencies and standards of measurement quite foreign to American practise. I was thoroly indignant when I discovered later in the school course that most of the arithmetical puzzles which had cost me so much labor could have been easily solved by algebra. I justly felt that an unwarrantable mental hardship had been imposed on me. I was fully persuaded at that early age that to put unnecessary obstacles in the path of a child's mental development was a pedagogical crime. After a long experience in educational method and discipline, I am still of that opinion. In education the easiest road should always be followed, in order to get farther with the same effort in a given time. The elements of algebra were well taught from a good book modeled on

the French algebras; but geometry came late in the course, and there was but little of it. No music, or drawing, or manual work of any sort was taught in the school. No science was taught, and no art practised there. If it had not been for the wisdom of my father, who took care to supplement the school program with private lessons for me in riding, swimming, carpentry, and turning, I should have gone to college without having had the least chance to develop the accurate use of my senses, or to acquire any serviceable art. As it was, altho I had a sweet boyish treble, I never learned to read music, and I never had any opportunity to acquire skill in the use of pencil, pen, or brush till after I left college. Such manual training as I received was obtained quite outside of school hours by voluntary exertions on my part during my scanty free time. Being city born and bred, I should not have known anything about country life if I had not had some boy cousins who lived in the country near Boston the greater part of the year. I learnt something also from a sport I practised spring and fall with some boy friends on fair Saturday afternoons and holidays for two years before going to college. We took train to some station a few miles from Boston, and then walked across country to some convenient station on another line, whence we returned by train to the city. In this sport I learnt much about the hills and valleys, woods, fields, and watercourses of the diversified country about Boston. This sport I past down to my sons, much to their advantage.

In the last two years of my Latin school course I began to enjoy the Latin classics, and particularly Virgil. Felton's *Greek reader* also afforded me some enjoyment, because it contained selections not only from Xenophon, but from Herodotus and Homer, and several minor authors. On the whole, the training I received at the Latin school, tho extremely one-sided, was serviceable in that it trained well the memory, and developed rather successfully the power of sustained attention to a prescribed task. When I left the Latin school for Harvard College at fifteen and a half years of age, I had acquired the habit of applying myself diligently to the task in hand,

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and I had a memory which could learn quickly a page of prose or poetry and hold it tolerably well. Such other mental accomplishments as I had were not due to the school, but to family influences. Of real teaching I had seen very little, and that little I saw in the last year of the school and the year before the last. The method of the school was to assign lessons and hear them recited. "Have you learnt your lesson?" was the incessant question. The boys of the first year often recited their lessons in grammar to the boys of the highest class, whose duty it was to see that the little boys repeated the words of the Latin grammar with accuracy and fluency. No explanations or interpretations were possible. Accuracy in repetition was the only thing demanded.

In 1844 to 1849 the full course of the Boston Latin School covered only five years. Accordingly, at fifteen and a quarter years I had completed that course, and was ready to attempt the examinations for admission to Harvard College. They covered nothing but Latin, Greek, mathematics, and a very little history. No English, French, or German, and no science were then required for admission. As the Boston Latin School often furnished a full quarter of the entire freshman class at Harvard College, a separate examination for Latin school boys was granted by the college in July, 1849, since Exhibition Day at the school had conflicted with the regular day of examination for admission to the college. Then, as now, college examinations were alarming and somewhat strict; but in 1849 they could all be put into eight hours of one day, and the greater part of the examinations in Latin and Greek was oral. The examinations began at six o'clock in the morning in University Hall, Cambridge; and before five o'clock the verdict in each individual case was announced. President Jared Sparks, who was an intimate friend of my father, told me the decision in my case in these words, "Well, Charles, you have got in clear." I have since had a good many verdicts of one kind and another delivered to me on later parts of my career, but I do not recall any subsequent verdict which gave me at the moment a stronger thrill of satisfaction.

It thus appears that the program and discipline of the

Boston Latin School was at that time well adapted to the end in view, which was the admission without conditions to Harvard College of as large a proportion of its pupils as possible. The attainment of the end reconciled many a Latin school boy to the unintelligent program and method of the school, and to the crudity—to say the least—of its discipline. Feruling was publicly performed in all the rooms of the school in which I sat during the five years, except in that of the headmaster; and in some of the rooms rough, satirical, or passionate language was used by the teachers to the boys. My father preferred for his only son a public school to a private school; and, indeed, the Boston Latin School was supposed to be the best school in the country for boys who were going to college. In 1849 its pupils were all of respectable American parentage, the influx of aliens into the Atlantic cities having then only begun.

In 1849-50 all the studies of the freshman year in Harvard College were required, namely, Greek, Latin, mathematics, a little history of Rome, and the elements of chemistry. There had formerly been some elective studies in the sophomore year; but they had been withdrawn two years before I entered college, during the presidency of Edward Everett, who was strongly opposed to election of studies. During the same reaction from Quincy's administration the number of elective studies for juniors and seniors had been reduced. Since the Boston Latin School boys had a good foundation in Greek, Latin, and mathematics, the principal studies of the freshman year presented for them no difficulty, if they were reasonably diligent. When, therefore, in the second term the freshmen began to study chemistry, I had time to give to that subject quite out of proportion to the place it held in the program, and I became greatly interested in it.

The college at that time possest no gymnasium whatever, and there was no organized athletic sport. Football, baseball, tennis, and golf were unheard of, and boating tended to be rowdy, and was practised by few. The boats in use by the few students who joined the boat clubs were strong, broad, ceiled barges, in which two or three of a crew of eight could

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convey the rest home to Cambridge at night, when other modes of transportation failed, or were unsuited to the condition of the men. It was not till 1858 that a Harvard crew used a shell boat, and boating became respectable and popular among men fit for it. Walking was the only form of exercise used by large numbers of students.

In 1849 Harvard College did not possess a single laboratory accessible to its students. There was no laboratory teaching in chemistry, physics, botany, or zoology, except in the Lawrence Scientific School, which had that very year opened two laboratories, one for chemistry and the other for zoology; but to those laboratories the students in Harvard College had no access. When, therefore, the young instructor in chemistry and mineralogy, Josiah Parsons Cooke, appointed in the winter of 1849-50, began in the middle of that year to teach the freshmen class chemistry, he was obliged to rely altogether on illustrated lectures and an elementary textbook; and this chemistry so taught it was which attracted my keen attention. In the second half of my first year in Harvard College, Mr. Cooke went to work with enthusiasm to create at his own expense a small chemical laboratory in the northwest corner of the basement of University Hall, which had formerly been a part of the kitchens of the Harvard Commons, discontinued that very year, 1849. The other half of the north end of University Hall was occupied by a bakery, to which files of men, women, and children resorted morning and evening to get various forms of hot bread in baskets and yeast in pitchers. The water used by the baker was drawn from a well under University Hall; and the new privies, erected for the whole college the season before, were within sixty feet of that well. Fortunately the baker's oven was hot enough to cook all germs! Into this laboratory I was admitted as a personal favor at the opening of my sophomore year, and there I studied general chemistry and qualitative and quantitative analysis in my leisure hours during the rest of my college course. I had the advantage also of assisting Professor Cooke—Instructor Cooke became Professor Cooke in 1851—in the preparation of his college lectures.

In 1851 there appeared among the elective studies of the junior year lectures on mineralogy, and among the elective studies of the senior year lectures on chemistry. The introduction of these elective courses was due to the energy and ambition of Professor Cooke. I availed myself of all public opportunities in this direction, and of much larger private opportunities. All the studies of the sophomore year, as well as those of the freshman, were required during my college course; but French and natural history appeared as required studies. I welcomed these novelties in the college course, and then enjoyed my very first opportunities to study a modern language and the elements of natural history. Most of the class were in my condition; and since many had no desire to pursue either study, the excellent instructors could do but little for the class as a whole, or even for its more diligent members. The fact that the son of well-to-do parents, who had provided him with the best educational facilities of the time, was not able to begin the study of French till he was sixteen and a half years old, and then began it under the most disadvantageous conditions, supplies an interesting comment on the degree of intelligence with which school and college programs were arranged in the middle of the nineteenth century; and the same might be said of the misplacement of the elements of natural history in school and college programs.

Professor Cooke was entrusted with two subjects, chemistry and mineralogy, and as professor of mineralogy he had charge of the mineral cabinet of Harvard College, which was in a state of great disorder, but nevertheless contained a large number of valuable specimens. From time to time I had the advantage of assisting Professor Cooke in the rearrangement of this valuable cabinet, and in three summer vacations I went on walking journeys with him for the purpose of collecting minerals for the cabinet. Our journeys extended from Nova Scotia and New Brunswick on the east, thru New England to New Jersey and Pennsylvania, toward the south. This was my first experience of scientific field work. No such opportunities were open to students of Harvard College in general; and, indeed, it was many years before field work in

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summer became part of the instruction given in the natural history departments of the college.

I had come to college with an elementary knowledge of Latin and Greek, and having pursued these subjects thru two years of college life, and Latin for a third year as an elective study, I might be said to have had when I graduated a knowledge of Latin and Greek which was something more than elementary; but it was by no means thoro or extensive from the grammatical and rhetorical, or the literary, point of view. Mathematics was required thru the first two years of the college course, so that by the end of my sophomore year I may be said to have obtained an elementary knowledge of trigonometry, plane and spherical, algebra, and analytical geometry. In the junior and senior years I took elective courses in mathematics under Professor Benjamin Pierce, who was an inspiring tho unintelligible teacher. His students all caught something of his ardor, but they never learnt to use mathematics as a tool in the pursuit of other subjects; and from the modern point of view my knowledge of mathematics when I graduated was still wholly elementary, tho I had studied the differential and integral calculus, and something of analytical mechanics. In chemistry and mineralogy I had learnt the laboratory and field method, and had gone a little beyond the elements of the principles and the technic. In no other subject which I studied in Harvard College—with a partial exception in the classics—did I get beyond the merest elements. No student, however diligent, could get beyond the elements in any subject unless he went outside the program fixt by the college. This was obviously true of philosophy, history, modern languages, physics, botany, zoology, and political science, all of which were supposed to be begun at college. That I got beyond the elements in chemistry was not due to any college arrangements, but to private opportunities unshared with even a single other student.

No fresh graduate of Harvard in my time had had a chance to become a real scholar himself, and, moreover, he had not seen among his teachers a scholar in the sense in which that word is now used. Among all the officers of instruction and

government in the Harvard Annual Catalog of 1852-53, the only scholars in the modern sense were Thaddeus William Harris, an entomologist; George R. Noyes, professor of Hebrew and other Oriental languages; Louis Agassiz, recently appointed professor of zoology and geology in the Lawrence Scientific School; Benjamin Peirce, professor of astronomy and mathematics; Asa Gray, professor of natural history; Jeffries Wyman, professor of anatomy, and Evangelinus A. Sophocles, a Thessalian by birth, tutor in Greek. Francis J. Child, George M. Lane, and Josiah P. Cooke, recently appointed professors of rhetoric and oratory, Latin, and chemistry and mineralogy respectively, were to become scholars; but the scholarly training of the first two had been received in Germany, while the third was self-taught. With the exception of Professors Pierce, Child, Lane, and Cooke, the gentlemen named above had either no contact, or very slight contact, with Harvard undergraduates; and it is to be observed that five of the seven real productive scholars were in scientific departments. In 1853 not a single one of the teachers in Harvard College had any advanced students—that is, students who had mastered the elements of a subject, and were capable of advancing into its larger fields. A graduate school of arts and sciences had been imagined at Harvard in the winter of 1846-47, when under the title of "The Scientific School of the University at Cambridge" "arrangements were made by the government of the university for the organization of an advanced school of science and literature." It was intended that instruction should be given in this school to graduates and others in the various branches of exact physical science and in classic learning. In the Catalog of 1847-48, second term, notice was given that "for the present the operations of the School shall be limited to the Department of Physical and Exact Science." It was not till more than twenty years later that the Graduate School of Arts and Sciences came into existence at Cambridge. Accordingly, among the members of the Class of 1853 there was not a single man who had made any large attainments as a scholar, altho with two or three exceptions the men were twenty years of age or more at

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graduation. Three or four of them, thru hard work and fortunate conditions in after-life, acquired some distinction as scholars, tho hardly in the sense in which the word scholar is used today. Such is the inevitable result of a college program of required studies, which was supposed to cover for every student his whole time in the freshman and sophomore years, and half his time in the junior and senior years, and which admitted a considerable number of subjects to the required program as well as to the lists of elective studies. A course of this character had been maintained in Harvard College from the beginning, with the gradual addition of new subjects and with an election among modern languages from about 1817, and for the parents and guardians of undergraduates an election in respect to certain specified studies in the last three years of the college course after 1843. In 1847 election of studies during the sophomore year was abolished.

Such being the elementary condition of instruction in Harvard College, how did it happen that among the graduates of Harvard in the first half of the nineteenth century there appeared historians like Jared Sparks, John G. Palfrey, William Hickling Prescott, John Lothrop Motley, George Bancroft, Francis Parkman, and Justin Winsor; essayists and poets like William Ellery Channing, Frederick Henry Hedge, James Freeman Clarke, Ralph Waldo Emerson, James Russell Lowell, Oliver Wendell Holmes, Thomas Wentworth Higginson, and Charles Eliot Norton; orators like Edward Everett and Robert Charles Winthrop; jurists like Joseph Story, Lemuel Shaw, and Richard Henry Dana; and such scientists as Benjamin Peirce, Jeffries Wyman, and Benjamin Apthorp Gould? These all took the degree of A.B. at Harvard while the entire course of instruction was prescribed, and therefore elementary and superficial in every subject. Nevertheless, these all became distinguished as authors. Should not such results raise our low opinion of the course of study they were compelled to pursue? It ought to be observed, in the first place, that a large majority of the authors named above added to their college course a professional training. Eight out of the twenty-three were trained for the ministry, at that time

the best educated profession. In the second place, the amount of time and attention required by a bright boy to dispose of his daily lessons under the prescribed system was but small; and if such a boy had any taste for literature or for some branch of science, he had plenty of time in which to gratify his taste. Under a prescribed system it is impossible to set up any high standard of attainment for remaining in college. Several members of my class graduated without difficulty who never were able to recite any smallest portion of the assigned lesson of the day in any subject. It was enough that they attended punctually recitations and prayers. Several were quite unable to earn a decent livelihood in after-life, from lack of any intellectual capacity or power to work. Even the members of my class who stood really high on the college rank-list had a great deal of leisure for outside reading and study. At the end of the four years' course I was the second scholar in the class; but all the way thru college I was able to apply myself with substantial results to subjects quite outside of the college schedules. At that time it was the custom for undergraduates who needed to earn money for their support thru college to keep school in New England towns for thirteen weeks, beginning with Thanksgiving Day near the end of November. The last six weeks of this period was a vacation for the whole college, the summer vacation being then only half as long as it is at present. During the rest of the school-keepers' absence, their classmates at the college reviewed the books they had studied during November, October, and a part of September, making no advance whatever in any subject. Here, then, was a period of thirteen weeks, a quarter of the whole year, during which an ambitious boy or an interested boy could study what he liked, altho he was much interrupted during the first seven weeks by attendance at three recitations a day, from which he learnt nothing. It was commonly supposed that the school-keepers learnt a great deal more during their absence than their less fortunate classmates who remained in Cambridge; and this was undoubtedly true, except for the youths who found within themselves some adequate motive for intellectual pursuits. None

of the famous men mentioned above procured his real training for his great work in after-life within the college program. They all had outside sources of information and inspiration. This was emphatically true of my classmate Justin Winsor, who had written his *History of Duxbury* before he was nineteen years of age.

I took the Harvard degree of bachelor of arts at the age of nineteen years and three months, and immediately set to work to learn French and German and the elements of accounting, while I gave the greater part of my time to the continuation of my chemical studies. In the spring of 1854 I was appointed Tutor in mathematics in Harvard College at the age of twenty years, having had no experience in teaching, and having studied no mathematics except that prescribed during the first two years of the Harvard College course and an elective course thruout the junior and senior years. The selection, altho it seems extraordinary to persons accustomed to the requirements now made of young men who are to teach mathematics in Harvard College, was an improvement on the common practise of appointing law students and divinity students to be tutors in Greek, Latin, and mathematics, on their way to the practise of their professions. I at least had the intention of becoming a teacher for life, altho mathematics was not the subject I preferred. Four years later I obtained official standing as a teacher of chemistry as well as of mathematics; and in 1861 I retired from the department of mathematics, in which I had done elementary work for seven years.

Such preparation as I had for the teaching of chemistry I continued to procure while a tutor, thru the good offices of Professor Josiah Parsons Cooke and in his laboratories, one of which was in University Hall and the other in the Harvard Medical School in Boston. It was not till the years 1863-65 that I had the opportunity of studying chemistry and education in Europe.

The marking or ranking system which obtained in Harvard College in 1849-53 was based on a mark assigned by the teacher to the student each time that he recited in the classroom. Inevitably the attention of the instructor was diverted

from teaching by this judging process. The scale was from zero to eight; and the theory called for a recitation from each student at every exercise he attended. It was not possible, however, to call on every student at every exercise; and accordingly the average mark of each for the recitations he had actually made during a month was multiplied by the number of exercises in the month, and this was the monthly aggregate for each person. These monthly aggregates were added together for each subject at the end of each half year; and the rank-list for the half year was arranged in the order of these aggregates. By adding the half-yearly aggregates of each student the rank-list of the year in each subject was produced; and by adding the aggregates of each student in all the subjects for each year the annual rank-list of the whole class was prepared. These four annual aggregates of each student added together and arranged in order, determined the position of each man at the end of the college course. There were no written examinations at the end of the terms or the year. Certain oral examinations of a very imperfect character, which were attended by visiting committees appointed by the Board of Overseers, were held for each subject at the end of each term; but since the examination of each student was very brief, and often failed to exhibit his knowledge or ignorance of the subject, not much weight could be attached to these examinations in making up the semi-annual aggregates by subject.

The common punishments for tardiness, absence, or misconduct were deductions from these aggregates; so that a good scholar might have his standing in the class much impaired by irregularities of conduct; while a poor scholar who was regular in his attendance and careful about his conduct could keep his aggregates unimpaired. In short, the scale of rank represented mixt results of scholarship and conduct. A good scholar who "cut" prayers, Sunday services, and recitations freely, and was caught in playing pranks, might come out at the end of the year far from the head of his class; while a dunce, or a bright fellow who never applied himself to his class-work but was regular in attendance and avoided deduc-

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tions for misconduct, got his degree, altho the aggregate of his marks in recitation was very low. The method had an appearance of great accuracy, but was invalidated in considerable measure by the fact that it was impossible to give each student a chance to recite at more than one exercise out of three or even four, and also by the deductions for misconduct. It made rank depend on the power to recite *memoriter* with tolerable accuracy short passages from the textbooks, without necessarily obtaining any consecutive knowledge or real mastery of the subject. Long written examinations two or three times a year involve more consecutive study of the subjects of the examinations and a longer holding of a line of thought or a developed argument than were needed for the brief oral recitations of 1849 to 1853. Moreover, the same questions are asked of every student—the only fair way in competitive examinations.

It was not till 1855-56 that James Mills Peirce and Charles W. Eliot, the two Tutors in mathematics, obtained from the college faculty leave to hold written examinations in the subjects of their instruction at the end of the half year and at the end of the year. The consent of the faculty was given reluctantly, and the Visiting Committee of the Board of Overseers were not pleased with the change. Even the committee members who had patiently attended four hours of rapid oral examinations found it dull work to examine the printed questions and glance at the written answers of the students. These were the first semi-annual written examinations ever held in Harvard College; but it was not many years before the method was adopted in all departments.

It was supposed that the students of my time would be made more faithful in study and be restrained from vice by the frequent required attendances at prayers, church, and recitations. There were prayers morning and evening, two Sunday services in the day, and three recitations a day for every undergraduate, one at an early morning hour, one about noon, and another in the afternoon. As an undergraduate and young officer I was never able to see that these well-distributed attendances had any restraining effect on the dissi-

pated, any stimulating effect on the lazy, or any useful effect on the good students. It fell to my lot, however, as a young tutor, to construct a new tabular view of the weekly exercises of all four classes, which should maintain the same distribution of the required attendances of the individual student, while the number of sections of each class for recitation purposes was increased. Smaller sections meant that the student could be called on oftener to recite, and that the teacher must endure more repetitions of the same lesson. I succeeded in making the needed tabular view, but learnt from my own experience and the testimony of my colleagues that the method was deadening for the teachers, while it was also of doubtful value for the students. The self-directing scholar with a long view ahead and a habit of sustained attention to one subject could not be produced on such a distracting schedule of hours, or such a marking system.

In the late fall and the winter of 1856-57 I was suddenly called upon, as a substitute for Professor Cooke, who had somewhat abruptly severed his connection with the Medical School, to give the lectures on chemistry habitually included in the regular annual course of medical lectures. This was a novel experience which proved to be of considerable value to me at the beginning of my service as President of Harvard University. I became acquainted with the quality of the medical students of that day, with the nature of the medical course, and with the small qualifications for medical and surgical practise with which most of the young graduates of the Harvard Medical School were discharged upon the community. The medical class in 1856-57 was made up of men whose previous education had been extremely various. There were a few college graduates and a considerable percentage who could barely read and write, while perhaps half of the class ranged along between these two extremes. There was not a laboratory in the school, except one untidy, crowded dissecting-room, and a small chemical laboratory to which Professor Cooke had admitted a few students to study as volunteers qualitative analysis and the elements of medical chemistry. No written examinations were possible with such a class; and the degree

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was given to any candidate who past in a majority of nine subjects at an oral examination which lasted in each subject five minutes for each candidate. It was because of his unavailing opposition to this standard of graduation that Professor Cooke had severed his connection with the medical faculty.

In the first term of 1858-59, when I had become Assistant Professor of Mathematics and Chemistry, I had the advantage of giving an elective course in mineralogy and crystallography which was open to those college juniors who elected chemistry, and during the second term of that year a course of instruction in qualitative analysis to the same students. This was my first experience in the laboratory teaching of chemistry. In the first term of 1860-61 I gave a course of laboratory instruction to those juniors who elected chemistry.

In the summer of 1861 my title was changed to Assistant Professor of Chemistry in the Lawrence Scientific School, and I was put in charge of the chemical laboratory of that school at a time when the academic duties of Professor Horsford, who had been in charge of the laboratory since it was established in 1847, underwent some change by agreement between him and the corporation. I remained in charge of this laboratory for two years, and was also required by the corporation to engage substitutes for Professor Henry L. Eustis, a West Point graduate, when he went to the war as colonel of a Massachusetts regiment. Naturally I became familiar with the discipline and methods of the Lawrence Scientific School and with the quality of its students. These were very different from what I had previously seen in Harvard College. Having some pecuniary responsibility for the departments of chemistry and engineering during these two years, I also became acquainted with the feeble resources of the school, and with the peculiar methods of accounting which had grown up there in consequence of the independence of each of its professorships. In those two years I came in contact with many of the students of the school who graduated in 1862, '63, '64, and '65. Out of the fifty-two graduates in those years, nineteen became in after-life distinguished in various scientific

callings; and among the students at that time who did not graduate there were several young men who afterwards became eminent in their respective professions, such, for example, as Henry Pickering Bowditch, William James, and Edward Sylvester Morse. It was a very different group of young men from any with which I had been connected in Harvard College; and my observation of them gave me great confidence in the value of a highly specialized instruction, when given to youth who were following enthusiastically their natural intellectual proclivities. The group, however, was far from homogeneous; for the school had been the resort of some students who were lazy or incapable of success in the traditional school studies, and were therefore unable to enter a college. There was no attempt to regulate the conduct of the students of the Lawrence Scientific School, except during the time when they were about their work in the laboratories or the drawing-rooms. The degree of the Scientific School had from the start been given only to candidates who could pass a serious examination on their own special studies, which must have been pursued far enough to qualify them tolerably for some scientific calling. It was of great advantage to me to come to understand the ideas of such men as Louis Agassiz, Asa Gray, Jeffries Wyman, and Henry L. Eustis in regard to teaching, investigation, and academic administration in the interest of research.

At various times between 1854 and 1861 I had enjoyed opportunities of assisting Professor Josiah P. Cooke in the chemical researches he was then carrying forward, and while I was in charge of the chemical laboratory of the Lawrence Scientific School I had some chances to help advanced students in chemical researches of their own. By 1863, therefore, I knew well from the point of view of both student and teacher what scientific research meant and how to promote it. A few years later, in association with my friend Professor Francis H. Storer, I learned all about the difficulties and the joys of research in the weighing and measuring sciences.

In March, 1863, my five-year term as Assistant Professor came to an end. Professor Horsford had resigned, and Pro-

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fessor Wolcott Gibbs, a chemist already distinguished both as a teacher and an investigator, was appointed his successor. The corporation requested me to remain in charge of the chemical laboratory of the Scientific School until July, 1863; but at that date my connection with Harvard College was terminated. I then spent two years in Europe, attending lectures in Paris, studying in several countries the organization of secondary schools and institutions of the higher education, particularly of laboratories, museums, and libraries, and spending five months as a research student in Professor Kolbe's chemical laboratory in Marburg. My professional prospects were dim; but I adhered to the resolution formed in 1854 to be a college teacher, and I acquired a good deal of information which was serviceable when four years later I unexpectedly became a university administrator.

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III

COMMON SENSE AND THE ELECTIVE SYSTEM

Amid the prolonged and not infrequently futile discussion of our American educational scrapheap, commonly known as the elective system, I do not remember having ever seen or heard the expression of a mere common-sense view of the situation. I have no intention of settling the vext problems involved in one way rather than another. The sway of the prevailing educational style may or may not be properly and profitably extended or curtailed, and only the future can tell what the American public will demand when it has taken stock, as before long it must, of the full-fledged products of this twentieth-century doctrine of election. For it is yet new in its social and nation-wide results. The overwhelming majority of the men who really count in the world were educated under the old and more restricted courses of study even in those institutions which were innovators in this field, while of course the smaller colleges of the country have had nothing even remotely like the fully developed elective régime for more than a decade or so. The period for the real test of its results is only now beginning, and this test will probably not become acute until another fifteen or twenty years have past, when the products of the present system of education will be called upon to fill the gaps in the ranks of the men who now count. For it is in this group of men that the real trial must be made. Any system will turn out a large percentage of the inferior and mediocre, but it will stand or fall mainly by the number of first-class men it produces. Even relatively high averages are not decisive here, for a single man of great ability outweighs a whole cargo of the fairly fit. If it should appear in the next generation that our present educational fetish produces only three or four

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men of great ability where the older produced eight or ten—and it would not require a highly developed gambling instinct to venture such a prophecy—then the good sense of the nation at large will demand a change and the educational profession will have to revise its methods.

But I have no intention of adding to or repeating current criticisms of the elective system. In one form or another it is here, and, despite the frequent signs of growing suspicion as to its being the sole prescriptive remedy, it is here to stay for some years yet to come. The real question is, what course to adopt in order to secure a valuable education despite the system, and here, as already observed, I have heard little or nothing *ad rem*. The problem confronts of course only the college man seeking a liberal education, i.e., the candidate for the bachelor's degree, and not the much greater numbers of those who are engaged in purely professional work and preparation and who are somewhat familiarly called college men, chiefly because of the circumstance that such trade and training schools are not infrequently appended to college foundations. In all such professional schools the elective system has made little headway. The men in charge of them know what sort of product they are expected to turn out and are quite certain therefore of just what their graduates shall study and in what quantities. Here and there some options are allowed in the "trimmings" of the professional training, but as a general thing the schools of law, medicine, theology, engineering, agriculture, commerce, etc., hold their students to an exact and rigorously required course of study that strikingly reminds one of the general type of education which prevailed among us less than a generation ago. That the greater practical success of these schools in meeting the demands of their professions is due in large part to the restriction and concentration of effort which they demand of their students, no one can doubt, and in the results obtained they contrast most favorably with the colleges of liberal arts. As a matter of fact, the elective system thus dominates only that range of studies which seeks to impart culture in the widest sense, and as an educational theory it breaks down

completely when applied to fields that have a single, definite, and concrete end in view. Yet on the general presupposition of the "electors," i.e., that the student is the best judge of what he wants to take, surely the student who is preparing for a single, definite, concrete service would know better what he wanted to study and could make his choice with greater intelligence, than the one who sought the higher and necessarily less easily definable things of the spirit. And conversely, the end in view and the means of attaining it being much more specific and limited in professional training, there would naturally be less need of staking out so narrowly the path than in the vastly wider field and more general aims of a liberal education. Yet, whereas among the simpler and more obvious choices the administrators of the professional schools pay scant or no respect to the ability of the average student to select his own course of study, because they know what their profession demands of the tyro, the college authorities in the infinitely more complex field of liberal education, by expecting little and requiring next to nothing, do thereby tacitly admit their own ignorance of what a liberally educated man is supposed to be, to know, and to be able to perform, and leave practically all decisions in this matter to the callow and unsophisticated youth. It were idle to go further afield in search of the primal cause of the prevalent relative inefficiency of the college as compared with the professional school.

But to come now to the real point. What shall the ordinary student do amid the perplexing offerings in the collegiate shop windows in order to make no irreparable mistake during his stay at college in securing the essentials of a liberal education? Well, to begin with, a selection must obviously be made. Assuming for the sake of argument that all subjects now offered in the typical college curriculum are of equal cultural value—a position which of course few would attempt seriously to defend but which our present organization would seem to imply—the student must, with only an occasional outside hint, make his choice among them. Art is long and time is fleeting, and it is impossible to take any but a

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small part of the offerings in four years. One fairly trembles to imagine how many years it would consume to take all the courses actually given, not merely announced, in a representative college. Now it goes without saying that a man who has set before himself the attainment of a breadth and depth of culture as a worthy life aim will realize that only the rudiments of this culture can be acquired during his college days. He must continue to build on the foundations then laid and add yet others to his own, else the fabric of his life will resemble the unfinished tower of the parable, or a richly planted garden choked up and gone to seed. Perhaps indeed one of the causes of the only partial success of collegiate instruction is that the ordinary student is graduated without the vivid realization that instead of having attained culture he has been merely started on the road that leads thereto, that only the tender plants have been set out and that they will need patient tending before fruition—but this is only in passing. Granted then that the serious student realizes that the years subsequent to graduation have a value for intensifying his educational beginnings and knowledge, and that training in certain lines of study must inevitably be put off until then, if secured at all, the vital significance of a wise choice during his four years at college becomes more apparent than ever. This point of view compels a classification of studies into those which can profitably and readily be pursued after graduation and those which can not. And here let me make the *caveat* that by "profitably and readily" I do not mean as well, or efficiently, but I wish simply to call attention to the fact that some studies are not only pursued outside of colleges, but frequently by a much larger number of persons outside than inside colleges, and in a very useful and profitable manner, even if not quite so well as they might be when conducted under college professors in the methods and with the surroundings of the best college life.

To take the most striking examples first. It would be extremely difficult or very expensive to gain any first-hand knowledge of observational astronomy or astro-physics outside of the college. A few observatories do exist apart from edu-

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cational institutions, but they are not readily accessible. It follows, therefore, that whoever wishes to work along these lines must do so at some time during his college course. Exception must constantly be made of the extremely rich, to whom wellnigh all things are possible, but the ordinary college man is not of that class. At the other extreme, training in music, vocal and instrumental, and to a certain degree theoretical, can be obtained practically everywhere in this country. The average college graduate will surely find himself in a place where fair to good instruction in all kinds of music is available, either in conservatories and special schools or under private teachers. It follows therefore that, if a young man wishes to know much of both astronomy and music and at the same time can not at all, or at least conveniently, do work in both subjects while in college, it would be far wiser for him to put off his study of music until some time after graduation and study his astronomy when and where alone he has the opportunity. In the same class with astronomy belong those other subjects in which proper instruction makes imperative the availability of expensive material equipment, primarily of course the pure sciences, as chemistry, biology, physics. Into the same group with music will fall to a great degree the modern languages. Certainly if a man wishes to learn Spanish or German for mere practical purposes, his lot will scarcely fall in any spot where he can not secure teachers—of varying competency, to be sure, but who know their language, whether they teach it well or not—while all cities of any size have schools of languages. Of course, if the history or the literature of a modern language be sought, the opportunities are not quite so abundant outside of college. Yet a man who already has any fair idea of what good literature is can very readily, upon acquiring the elements of the language, read Anatole France, Hauptmann, or D'Annunzio, without much guidance, while for the classic writers in each literature scores of guides exist in the shape of histories of letters, biographies, commentaries, and annotated editions, which to a large degree may take the place of the college teacher. Besides, in the present state of intellectual interests

in this country it is not a difficult thing to form little clubs or circles from two or three up, in which representative foreign authors can be read or even studied with interest and profit.

Let us suppose, therefore, a case where a young man is in doubt whether to choose a science or one of the less important modern languages, say Spanish, or Swedish, purely for cultural or educational purposes. Let him bethink himself that he is very unlikely to learn anything of zoology say (tho he may pick up some information about it) after graduation, while he will have a fair chance to study his Spanish or Swedish whenever he wants to, whereas instruction in French and German may be secured in almost any community. Other things being equal, therefore, the young man, if in doubt, would naturally take the sciences while in college.

Another class of subjects is that in which the material equipment is neither elaborate nor expensive, but the inherent difficulties are great, in that demand is made for long-continued and complicated logical processes where errors are very likely to slip in and any single error is certain to vitiate the total conclusions, and where it is hard for the beginner to detect his errors unaided. Such subjects are mathematics, philosophy, the ancient languages, Sanskrit, Hebrew, Greek, Latin, and the earliest periods of the modern languages, i.e., Old French, Old High German, Anglo-Saxon, Gothic, etc. Here the material equipment is comparatively inexpensive, twenty-five dollars' worth of books would carry you well into any one of these subjects, but the complications are such, the mistakes of the beginner so numerous and so difficult for him to detect, that it requires great and persistent intellectual effort to make profitable headway in studying these subjects alone. Furthermore, the opportunities for studying them under personal instruction upon leaving college are comparatively remote. There is perhaps some faint chance in mathematics, but even then only in the lower and simpler branches, while the opportunities are so slight as to be almost negligible when you come to Greek, or Hebrew, or Sanskrit. And therefore our student-ass between the two haystacks should realize that if he rejects mathematics, or Greek while in college, he is

practically excluding himself from all the cultural values that these subjects contain for the rest of his life.

There are yet other fields of knowledge in which the point of view is the only matter of much consequence. Such are, for example, history, economics, sociology, and political science. Here the store of facts is enormous, and they are in large part readily accessible. The difference between the trained and the untrained mind herein consists not so much in the quantity of knowledge as in the scientific or historical sense, or attitude of mind. This can be given frequently by a good teacher in a single course, or in a few weeks. Once acquired, the student has a standard of intellectual reference which he can use without essential modification in transferring his field of study. Thus, if a man has acquired the historical sense by a detailed study of ancient, or early medieval, history, where perforce all the emphasis is laid upon the discrimination and proper valuation of sources, it is obviously idle for him to spend semesters or years in college in exercising this historical sense in one field after another. Or if he has secured it in studying one phase of American history, why take any large number of the courses on that subject which the typical American college offers? Or in economics, once the correct point of view is obtained, a man can add to his economic knowledge *ad libitum* after graduation, there is no need in taking course after course in the subject while in college for a liberal education. And so our student again will doubtless find it necessary to take one or two courses perhaps in each of these groups as a basis for the future superstructure, but he will not find it necessary to "load up" on these subjects to any very great extent. Let breadth and content of economic and historical knowledge come from future reading, and of course every civilized man who lays any claim to culture in these days makes some effort to enlarge his knowledge of historical, economic, and political questions at every favorable opportunity.

As for English, one must be careful of one's words before this Diana of the Ephesians. In so far as it gives a correct viewpoint, or, as Mr. Arnold would say, a "touchstone," the

same is true of it as of historical and politico-economic questions. A little of the right kind in the college course is enough. But surely there is no occasion for taking course upon course of mere reading and reporting for a liberal education, and to one trained in the more serious and not infrequently grim aspects of the old classical education it seems little short of a travesty for *credit* to be given any one who will merely consent to inform, delight, and amuse himself by reading Shaw, or Tennyson, or Byron, or Addison, or Milton, or Shakspere, or anybody else who ever wrote good and entertaining English. Certainly all these authors can be read after one's college days are over, and will be read by all but the intellectually warped and torpid, and to cast pearls before them is in any event a vain, if not a dangerous, experiment. In so far as instruction in English really gives a man a mastery of his own language, every one will say God Speed. But here the English courses must submit to the strictest examination for efficiency, and many are not as yet convinced that very much has been accomplished along these lines. Parallel with the development of widespread and time-consuming exercises in composition there has run a steady cheapening and coarsening of the language, and, tho no one would claim that the increased study of English has caused this condition, it certainly has done little or nothing towards delaying the process. The teacher of the classics seldom accomplishes a tithe of what he wishes he might, but I know of nothing that so fills him with an abiding sense that he has accomplished *something* as an examination of the sort of English an undergraduate, or even a graduate ordinarily employs after years of high school and college exercises in what was to start with his mother-tongue. It is, besides, a most contestable assumption that frequent exercises in writing themes constitute the best preparation for securing real mastery of a language. In fact the formal study of language, its grammar and rhetoric, bears but scant relation to the ability to handle it effectively. Much of the very noblest of Hellenic literature was produced long before Protagoras' epoch-making discovery of the three genders and the four moods, and all the really

great literature of Hellas was produced before exercises in themes and compositions became the vogue. Never did any nation throw itself with greater subtlety and more self-sacrificing toil into the pursuit of formal rhetoric, the niceties and refinements of vocabulary, of structure, of composition, and of cadence than did the Hellenes in the age of their decline; and never was greater intellectual effort frittered away upon the production of the trivial or the meaningless—no, not even in the futile debates of the Scholastics. The abiding glory of Greek letters was won when men had something to say and groped about for the means of expression. A kindly oblivion has almost wholly destroyed the products of an age that had indeed learned the mechanics of expression but had no message.

To conclude, one might draw up a table of those subjects which (1) must be studied in college, if ever, e.g., the sciences (including psychology), mathematics, the ancient languages, and the early periods of the modern languages; (2) those which ought to be studied in college at least so far as the point of view is concerned, but pursued further after graduation, e.g., philosophy and logic, history, economics, political science, English literature, and the modern languages as literary criticism; (3) those which may be taken in college, but can with profit be both begun and continued after graduation, e.g., English literature and the modern lauguages as mere reading and for practical purposes, art, music, household science, etc.

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IV

BOTANY IN THE COLLEGE COURSE[1]

There is, perhaps, less need at the present time than formerly to preface this article with an explanation that the study of botany is no longer a question of mere classification and terminology; and yet there still remains among many persons the opinion that the botanist is instinctively a collector, and consequently a classifier, rather than a student of plants as living organisms. Such being the case, it is scarcely to be wondered at that these same people persist in the assumption that there is nothing of general importance or of compelling interest in the study of plants. To those who are acquainted with the aims and desires of the modern teacher of botany, such a point of view is palpably a mistaken one, for, if anything, the pendulum has, perhaps, swung a little too far away from what has been called the "knowing of plants." To "know your plants" in former days meant the ability to name every form which might be met in an afternoon walk, largely disregarding the profoundly interesting and important structural or physiological facts that they might exemplify, or the relation of plant life to general biological problems. So much has the trend of today turned away from the study of merely descriptive botany that students sometimes complain their course in botany has not given them enough opportunity to learn the names of plants, thus placing the less experienced teacher in somewhat of a quandary as to whether it be better that the student be instructed in the fundamental principles of plant structure and behavior or that he simply be enabled to name the individual plants which may be seen in his

[1] Earlier articles in this series on college subjects appeared in the EDUCATIONAL REVIEW for April, May, September, October, November, December, 1910, March and May, 1911.

walks abroad. There is, however, no doubt as to which is preferable from the standpoint of training and general education, and botanical teachers are today universally agreed that it is the principles which should be taught as affording the student a comprehensive outlook over a branch of knowledge which is in reality of the first importance to the human race. Ability to name the flowers is an interesting accomplishment for the amateur, but as a mere avocation it is not a pursuit which in itself often leads to any great intellectual advance for the student, and may degenerate into an occupation scarcely of more intrinsic value than the collecting of postage stamps.

The most ardent enthusiast would scarcely maintain that each and every college student should be required to pursue the science of botany, even in its modern mode of presentation, but it can be said without exaggeration that the study of plants may be made as good a vehicle for training and also for affording as wide an outlook on the whole field of scientific knowledge as any other of the sciences. If it is admitted that science in some form is indispensable in a college course, it may be further concluded, if what has been said is true, that botany has a place in the curriculum.

It is not the intention to discuss here in detail the content of any one course or series of sequential courses in botany, which will fulfil the requirements indicated above, except in so far as particular topics may exemplify the purpose or illustrate the mode of attack of the teacher in developing a consistent scheme of study in the subject. Rather it will be the attempt to show what botany is capable of as a means of scientific discipline.

For the very reason that botany is no longer merely the study of gross morphology largely exprest in terms of classification, there is less ease than there used to be in delimiting it sharply from other sciences, not the least indeed of its advantages, educationally speaking. Formerly there was commonly understood to be a fairly clear distinction between the exact experimental sciences, like physics and chemistry, and the purely observational ones, like botany and

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zoology, at least as they were taught. Now, however, the great increase in the development of the experimental side, which in its last analysis leads to the provinces of chemistry and physics, makes botany for instructional purposes, as well as for itself, a science in which pure observation is greatly tempered by experiment. Such a combination is a peculiarly fortunate one, and it is just here that botany presents practical educational advantages over almost any other science. We have, then, the possibility of training students in direct observation from natural objects in conjunction with observation of experimental phenomena from which conclusions may be drawn more or less indirectly.

It may be objected by some that the development of the faculty of observation is so simple, so fundamental, that it should be cared for by the most elementary form of science teaching, namely, nature study in the schools, and that it is not a thing with which the college should be concerned. However, while undoubtedly much can be done along this line in the schools, it remains for the college to take up the training where the schools must necessarily leave off. The kind of discipline which should be given to college students is beyond the powers of persons of lesser mental growth than is normal at the average college age.

At once the strictly utilitarian pedagog may ask what is the value of training in accurate observation if, as seems to be the case, one can get along comfortably in this world without very precise understanding of one's surroundings. Granted that this is true, that we may attain measurable happiness and prosperity and still remain ignorant of the structure and functions of the tree which shades us from the hot sun, the fact remains that the more keenly we react to the circumstances of our environment, the more we raise ourselves above the ruck of humanity and thereby reap a certain advantage.

To attempt to answer a question at once so simple and yet so complex as the importance of being able to see things as they are without prejudgment or prejudice, is like attempting to expound a truism. From a strictly practical point of view, it is true that it would no doubt be impossible to follow

a chain of circumstances to show how such knowledge might enable the average man to survive where another perished, or similarly how it might enable him to win fame and fortune where another remained obscure and impoverished. The value is the same which comes from training in any kind of clear thinking, whether it be that of mathematics or logic or the botany of which we speak.

The means of acquiring this type of training is no more arduous than the attainment of any other intellectual goal which is worth while, and is quite as interesting; but it does demand work on the part of the student and skill on the part of the instructor to obtain the results desired. It is thru the laboratory, where the student comes in actual contact with the living material, that this is possible. He learns in the beginning that each line that he draws has its meaning and that no careless slipshod sketch can represent with accuracy the object before him. He then further finds that sins of omission are equally fatal to accurate representation as sins of commission. He must recognize the naked truth. It is not the question of his own or any one else's opinion whether a certain appearance is or is not as he thinks he has observed it, but it is a question of fact, and he is forced to appeal to the object itself for his answer. Another point of advantage is the segregation of the student in the laboratory, since he is thereby forced to do his own work and his own thinking. It is the fault of the instructor if he is helped too much or is allowed to be prejudiced by drawings or descriptions of the objects studied. It was just this spirit which imbued the teaching of the elder Agassiz, and which, in a modified form, is still recognized as an important principle of the best instruction. Of course, like all things good in themselves, the practise of making the student work for himself can be overdone, for it is impossible for the ontogeny of the mental development of an individual to recapitulate *in toto* the phylogeny of the development of a science. And if it were not impossible, certainly it would be absurd. It is for the instructor to make sure that the student does not waste his time and energy in floundering among problems that his

experience could not enable him to solve, and at the same time to bear in mind that it is not simply information which the student needs. Even the best scholar will think he sees what he is told to see, be his instructor a book or a person, and if informed before he has made an attempt to investigate for himself, he gains no power to overcome difficulties in observation. In other words, it is in the increase in power of a previously untrained faculty which makes this instruction, if properly carried out, profitable in the broadest sense. It is not to be supposed that the particular observational problems presented to him in the laboratory will ever face the individual in the outside world; in all probability they will not; but the necessity of independent observation and of drawing conclusions therefrom certainly may face him, and he can meet them more successfully if his mind and his eye are habituated to work coordinately. Preeminently in the laboratory is this training afforded; a slow process, perhaps, and an expensive one, too, educationally considered, but more than worth the cost both in time and energy. Lest a misunderstanding arise, particularly among those who consider laboratory training simply methodological and suitable only for those who intend to make a life career of biological study, let it be emphasized that the problems put before the student should be carefully chosen, so as to be within the range of his possible interest, and sufficiently varied so as to avoid a merely tiresome repetition of endeavor. The student should be led on to investigate the object of his study, to interpret it first in his own terms, and later to modify his interpretations by outside help in so far as he may have been wrong in the first place. It is unfortunate that among some the laboratory method, which in reality affords one of the best pedagogical excuses for the study of science in college, is misunderstood and has fallen into a certain disfavor. It is regarded wrongly too often as a study in the methods of some special science. Nothing could be more false in the matter of laboratory teaching as it is applied, at least in modern botany. Methods other than those dictated by simple logic, by common sense, if you will, cut no figure whatsoever. Terminology

even is cut down to its lowest terms. The work resolves itself fundamentally into seeing things as they are, interpreting the observations by the simplest processes of clear thinking, and finally recording both the object itself and the conclusions drawn from it, with strict honesty. The net result is clear seeing, clear thinking, and a clear conscience. No better drill in the advantage and necessity of intellectual integrity, and the absurdity and waste of any shilly-shallying ways can be afforded than by the laboratory method, particularly as applied in the biological sciences. Granting it to be possible to attain such desirable ends by laboratory study in a botanical course —and experience teaches that it is—we have a service of no mean importance for the study of plants to render the general cause of education, and a service which is needed in the college as much as in the school.

The general value of a single course in botany for the average student rests, in the writer's opinion, to a very considerable extent, and perhaps principally, upon how far the kind of training indicated above has been given to the students. But if one important aim in the study of botany in the college course is the manner of training which it affords in a certain type of clear thinking, there should not be forgotten another lesser, tho entirely legitimate purpose, namely, the increasing of the pleasurable appreciation of the things of the world and consequently the enlargement of the ability for rational enjoyment of life. To that type of mind which instinctively turns toward the natural objects around it, a proper understanding of the forms and behavior of plants must add not inconsiderably to the satisfaction of existence. To gratify a desire for knowledge of this sort is not only a proper function of the college course in botany but a duty which is imposed upon it. This aspect is undoubtedly emotional or esthetic in its nature, and as such is likely to be decried by those who preach science for science's sake. With the natural distaste for anything approaching the sentimental, not a few confuse such an attitude toward a science as a matter for reproach, and even in those who may advocate it there is often a somewhat shamefaced, apologetic expression

of their approval. But there is no reason why we should be ashamed of the thrill which comes from such a source or why we should assume an attitude of indifference toward knowledge of anything, lest it excite a pleasurable reaction and just so far enrich our lives. Such an attitude is entirely too Puritanical. The man who, in his walks abroad, has a sense of the significance of plants as living organisms, who can more or less justly appreciate the rôle they play in the scheme of things, and may even weave his thoughts about them into his philosophy of life, is surely a gainer by his knowledge. All this feeling may be legitimately developed without recourse in any way whatsoever to mawkish sentiment. There are many persons, laymen as well as scientists, who so greatly fear anything which seems to hint at a whole-souled and living enthusiasm in nature that they lean backwards in their attempt to walk erect. It is for just such persons that this point of view is invaluable in developing an important human characteristic which, being latent, might eventually become atrophied for want of use. The man who can take a real and lively interest in nature is supplied with an avocation for the mind which will stand him in good stead in times of stress.

There is nothing better adapted to stimulate the imagination in a certain type of mind than one of the so-called natural sciences, and of these botany is certainly not the least well adapted for the purpose. It has been said that imagination is one of the most valuable assets of an individual in determining his success for himself and his value to the community, and therefore any means by which this orderly imagination may be cultivated is not to be disregarded. It is popularly thought, perhaps, that the proper field for such cultivation is in literature or art or music, but in no less degree does science make an appeal, and make it often, to a mind which does not react to any of the so-called humanistic studies, tho it must not be supposed that one necessarily precludes the other. If science then adds its quota to the development of a properly ordered imagination, without which real progress is hampered, botany can well play its own part in attaining this end, and any instruction in the subject which fails in

endeavoring to afford such a stimulus fails in an important respect in justifying its existence.

One important phase of this training of the imagination, which in this day is strongly accentuated in one way or another, devolves especially upon botany. That is, the insistence upon the respect for plants or the aggregation of plants as organisms which have other uses than directly affording food, clothing, or shelter for man. The student learns that the individual tree or aggregation of trees is something more than a mere magazine of lumber to be consumed ruthlessly or simply wasted. Knowledge, tempered by imagination, shows that the tree or forest, even in regard to man's own selfish interests, must be respected. In short, the whole question of the conservation of the plant products of the country, or of the whole world, is not unconnected with an understanding of what the living plant is and how it behaves. It is easy to see that the more persons there are who have an intelligent understanding of these important questions, the more hope there is of establishing a public opinion in such matters that in the end will be of immeasurable advantage to the community. Here we have an important function of botanical instruction in the college, at least in continuation of what may have been learned in the school, if not as originating, indeed, as it must in many cases, in the college itself.

We have, then, two functions of botanical training aside from the informational content of any course—one the training in the interpretation of objects seen, the learning to know something as it really is, and the other the development of the rational, emotional, or imaginative instincts of the student's mind.

When we come to the consideration of the place of botany in a college course from a purely informational side, we might, in the first place, treat it as an applied science, and point out the utilitarian fields in which trained botanists can earn their livelihood and make themselves of use to the community; but since that is so large a field, and since also it is rather apart from the general trend of these articles, we will pass it over with simply this mention. But it is germane to

call attention to its importance in preparation for work in professional schools. It is the writer's belief that a knowledge of botany is second only to zoology for students who propose to take up the study of medicine. Not only in its relation to bacteriology, but in the general physiology of plants, will the prospective medical student find much that is of value to him. Many of the fundamental principles of general physiology are better exemplified and can be more easily demonstrated in plants than in animals, and the points of similarity as well as dissimilarity are highly illuminating. It is true that to be most useful to this class of students a somewhat special course might best be devised; but, taking it all in all, especially when one considers the training that is obtained, a medical student could well afford, with great advantage, to elect a general course in the principles of the subject.

Now as to the scope and nature of botanical instruction there is a very wide range of possibility. Let us consider first a general introductory course dealing in the main principles of the subject, the course beyond which most students do not go. A certain amount of botanical fact must of course be presented in one way or another to the student. It is not the intention to discuss in detail here either the extent of fact or the method in which it is acquired. There are numerous, perhaps equally good, schemes which may serve this purpose, depending not a little on the natural bent of the instructor; but in certain matters there should be some agreement. First, the relation of the science to other fields of knowledge should be accentuated, whether it be to the obviously allied one of zoology or to the more remote one of economics. This is especially important where the introductory instruction is given to students young in their college careers. Not only does this method lead to a proper understanding and appreciation of the subject itself, but also to a more comprehensive grasp of the possibilities of the whole field of human knowledge, for the ramifications of a subject like botany are so many and so far-reaching that it touches upon many lines. It is perfectly germane for the botanist to dwell considerably upon chemistry and physics; indeed, without such treatment no

proper presentation of modern botany could be made, for the physiology of plant organisms is definitely traceable to fundamental chemical and physical happenings. Likewise geology, physiography, and meteorology are in no small measure directly articulated with the study and understanding of plant life. In the consideration of the possibilities for plant production presented by various regions or by various methods of culture, we have one phase of botanical study which may touch pretty vitally upon economic questions. It is not supposed that the instructor should pose as omniscient in such matters and thereby render himself ridiculous; it is enough to attract and fix the attention of the student on these different phases that he may, if he choose, investigate them more thoroly by more special study. There should be no excuse for the indictment of narrowness against such a course.

Next, perhaps, attention should be called and examples given of the different types of reasoning by which botanical facts have been established. In a sense, this is the philosophy of the subject, and botany, with its diversified fields of interests, gives excellent examples of various types of scientific reasoning. The interpretations of homologies, the significance of classifications, the construction of phylogenetic relationships, the proper place of teleological reasoning in the interpretation of structure or behavior and many other subjects, offer excellent opportunity for the explanation and exemplification of the philosophical aspects of the science. A proper treatment of such matters adds directly to the mental training of the student, introducing, as it does, direct application of modes of thought perhaps not previously within his ken, or, if known, known only in an academic way.

In common with zoology, botany affords an opportunity for understanding the problems of evolution upon which no inconsiderable accent should be laid. In connection with this, genetics and heredity find their place. In the general introductory course, then, from the strictly informational side, we would accentuate morphology, both external and internal, and physiology, treating of classification only as it illustrates the general principles of phylogeny.

The following year would be naturally spent with a more careful study of morphology of plant forms, for it is a capital mistake to attempt a fuller consideration of physiology until the student has a thoro basis of morphology. Physiology being the more compelling side of botanical study, there is a tendency nowadays to rush into a consideration of function before the student understands the organs which functionate. This tendency is common to both elementary botany of schools as well as that of college work. While it is the writer's firm belief that the study of morphology alone is, in the larger sense, somewhat profitless, he is also of the opinion that to attempt to study the functions of an organism before its structure is grasped is like trying to run an automobile without understanding the morphology of its mechanism. Everything runs smoothly until an inhibition or acceleration of some function takes place, and then the would-be chauffeur is in a quandary, and progression usually ceases in one way or another. The over-accentuation or too early consideration of physiology seems to be due to a desire to make the subject attractive, a praiseworthy and excellent purpose, but one which can, like every other good thing, be overdone.

The more purely physiological point of view is taken up again to the best advantage in the third year, when the student has, besides increasing his botanical equipment, presumably improved that in other sciences, particularly in chemistry. This should by all odds be the most attractive year, for the student should be able to come pretty close to some of the vitally interesting problems of organic response.

This would usually complete the botany which an undergraduate studies, for the subject would be commonly begun in the second year; but for those who have a fourth year at their disposal several lines of activity are open. The morphologically inclined can return to their favorite field, either in the study of the higher or lower forms, while the physiologist can take up some more intensive work in his line.

While a sequential course of three or four years has been sketched out, there will naturally be but few who undertake such extended work. To the great bulk of students who elect

the subject the general introductory course will represent the sum total of their botanical studies. It is for this reason that the first year should be very carefully planned, and should be conducted by whosoever in a given department has the widest range of experience. A usual line of activity open to persons who are interested in botany after they leave college, is that of studying the flora of the region where they live, the old-fashioned type of botany, and one that allowance should be made for in any group of botanical courses in college, but as has often been pointed out, this need not degenerate into the mere naming of plants. The point of view of the properly trained amateur botanist of today should differ from that of his counterpart of two generations ago, for he should be interested in the relation of his plants to their environment, to their heredity, and, in general, to larger philosophic considerations.

In closing, there is one word that may be added, namely, that it is the writer's opinion that in both a purely pedagogical and informational sense, botany and zoology rank equally with physics and chemistry in suitability for a required science option in the college course.

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V

CHANCE AND MAN

As one reviews the history of human progress, from primordial conditions to the highest of modern achievements, he becomes conscious of the fact that the truest measure of man's advance, individually and collectively, is the degree in which chance has been eliminated from the issues involved and positive certainty set up in its stead. Stated in this form, this principle has as yet been but slightly realized, even by the philosophers, poets, and prophets of the race; while to the rank and file it is still, practically, an unknown, or at least an unrecognized quantity.

With primitive man, chance was the chief factor in his life. His food supply was almost wholly dependent upon it, and shelter and clothing were similarly conditioned. If he went out to hunt, he took his chances of finding game, and he fished by the same rule. If he were a shepherd, he led his flock where pasture chanced to be. The first human habitation was a hole in the rocks which its occupant chanced upon, and the scant clothing he and his wore was of chance origin and adaptation. These are the records of individual man in his earliest estate.

Collectively considered, the same chance factors are so pronounced in the early conditionings of the race that their recital seems superfluous. When a plague broke out among a people or tribe, its members had no protection against its ravages, but each one had to take his chances of perishing from its unrestricted attacks. Famine ran riot after a chance unfavorable season, and there was no way of warding off its devastations. The sailor on the high seas took his chances of surviving the storms he was ill prepared to weather, and the farmer knew not when he sowed his seed what the harvest would be. But as man has progrest in the scale of being

all these conditions have changed, to a greater or less degree, and the measure of his advance is the total of his emancipation from the chances which so long held him in thrall.

It would be a most interesting study to trace in detail the eliminations of chance from human undertakings in the thousand-and-one enterprises men have been and now are engaged in; but such record would be too difficult and extended for this paper. All that is needed for the purpose in hand is to establish the general principle as heretofore stated, and this has been done to the required degree of certainty.

In view of this principle it follows, first, that the chief end and aim of all education whose purpose it is to forward human progress should be of a kind that helps to eliminate chance as a factor in human endeavor and to set up in its stead positive certainties which can be banked on beyond peradventure. Of course to obtain such result in supreme degree is as yet a far-off divine event; but, none the less, it is one towards which the whole creation must move, if it ever gets on.

All of which leads us to bring to the test of efficiency in establishing such chanceless conditions any and all educative means and methods that have ever been used, or which are now in vogue. Here, again, a detailed and itemized study of the phenomena would be both interesting and profitable, but space forbids its elaborate consideration. Only the general idea of proving-up educative agencies in this way can be broached and from this certain conclusions arrived at. Of these, the single principle to be insisted upon is this: that any form of education, the pursuit of any study, that has in it a large element of indefiniteness does not tend to eliminate the element of chance from the thoughts, words, and deeds of the pupil who pursues it. On the other hand, those studies and educational exercises which lead the student to produce positive, preconceived, and definitely striven-for results do tend to help him or her into a condition in which chance becomes a constantly diminishing factor, and hence advances such individual in the scale of human progress.

This does not mean that it is possible to enumerate, study by study, such as will help or hinder in achieving the end

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sought. The fact is that no one study could be named which would act uniformly and equally in all cases, either one way or the other. The application of the principle should follow the bent of mind of each pupil in every case, certain studies serving here, and others as well or better elsewhere. The one point that should never be lost sight of is this: that if any given study fails to lead the student to habitually secure chanceless results, such study is ill suited to the needs of that particular student. This is the ultimate and never-failing test of the educational value of any study for any individual. If the reader will review his own experiences as a student he will become fully persuaded of the truth of this statement, but, by way of demonstration, an instance in point may not be out of place.

The writer well remembers a classmate in Latin to whom a translation was like trying to put together a Chinese puzzle in which no sense of the relationship of any part to any other part was in any way apparent to his mind, and of how his teacher used to say to him, after listening to the malformed sentences which the poor boy painfully pronounced: "Shake them up again, George! Shake them up again!" It goes without saying that such work and all like it can never tend toward the elimination of chance from the thoughts, words, and deeds of students who are as ill matched to what they are set to do as was this pupil, and whose efforts yield such haphazard results. The case cited is not solitary.

It is not difficult to believe that the great favor which is now being shown toward concrete educational means and methods, such as are offered in manual training and domestic economy courses of study, is grounded in the fact that for the great mass of pupils who attend our public schools these studies offer the maximum of opportunity for the elimination of chance as a means of producing the results sought. When a boy is set to fit two boards together so that they will "match" perfectly, or a girl to make and bake a loaf that shall be of high quality, the results, in both cases, are almost entirely determined by the skill of the worker, and the element of chance, both in performance and product, dwindles desirably

near the vanishing point. This may not be true for all pupils, certainly not for all with equal potency, but it surely obtains with the vast majority of them. The pursuit of these studies in our schools is demonstrating the utilitarian value of concrete educational work as a factor in human progress in that it tends to cultivate the habit of eliminating chance from the outcome of human endeavor.

Nor should the principle announced be held to apply to educational affairs alone, since it is equally potent and forceful in all life pursuits. Even amusements can rightfully be brought to the same test and their excellences or demerits truthfully determined by the same rule; this, perhaps in a general rather than in a specific way, but the conclusion reached has to be respected, no matter what we may wish about it. Judged by this standard, dice and roulet, and all similar games would fall under condemnation, since chance is the sole factor in their make-up, and most games at cards would suffer if checked up in this way. Hoyle, who is counted as the best authority regarding card-playing, declares that ninety-eight per cent. of the results in a game of whist are pure chance; and the same ratio is probably true in most games at cards. That it may serve to amuse to now and then sit down and interestedly watch how "the cards will run" is not to be denied. But that it is well to indulge very freely, much less to be addicted to engaging in an exercise in which chance is so dominant a factor, can not be granted. This conclusion is specially applicable to young people.

On the other hand, chess, checkers, billiards, ninepins, baseball, football, and many other similar games that might be named, meet the requirements laid down by the principle at issue, since their results depend so largely on the skill of the players rather than upon the element of chance. Of course there are modifying circumstances that can be legitimately urged regarding the practise of these games, but the general rule holds good, after all.

Again, the relative values of the various professions and occupations of life can be accurately determined by the principle set forth in this paper. At this stage of the argument

there is no need of going into details, since each reader can make up a list to suit himself and prove the same out by the rule. But, in brief, it should be said that many professions and occupations that were once almost wholly at the mercy of chance are now largely redeemed from the influence of that baleful factor. Agriculture was for many centuries almost the worst of chance games. Doubtless it is for this reason that farmers have the name, some of them at least, of being the most venturesome gamblers in the world. But today, while the rainfall and the frosts are still beyond control, farming is becoming, in ever-increasing measure, a certain industry, almost unequalled in the definiteness of its rewards. Cereals are now sown and cultivated in such manner as almost to insure a bountiful harvest, while the fruits of trees and vines are rescued with unerring certainty from the ravages of chance storms, chance insects, and chance diseases, till the husbandman can now be quite positively sure that his crates, boxes, and barrels will be filled in due season.

The list of occupations which are, and are becoming, chanceless need not be itemized further; but it may not be unprofitable for the reader to note where stock-jobbing would rank if measured by this principle, also mining for gold and silver and some other similar enterprises. In professional life, surely medicine, especially on its surgery side, is fast becoming wellnigh chanceless, while the law may be moving in the same direction. However, so long as it is currently held that "Even God Almighty can never tell what the verdict of a jury will be," the practise of this calling can not be so very conducive to the cultivation of the virtue of certainty in the lives and characters of those who pursue it. Still, under the action of the forceful law of progress in all the activities of life, it must come to pass that these things shall not always be as they now are.

Concerning the clerical profession——?

As we approach the higher issues of social life, the force of this principle becomes more and more manifest as a valuable asset in human progress. The great bulk of the wars which the world has seen have had their beginnings in chance

and their outcomes have largely been determined by the same cause. But we are beginning to see great international differences settled on a basis of equity and justice rather than by force of arms arrayed by the chance whim or passion of some man or woman who happened to want to "get even" with somebody, or "pay off a grudge."

Probably the highest achievements of this principle are found in the realm of animate life-forms. Doubtless the variations in plants and animals have always been caused by intelligently directed energy, but none of this was primarily under the control of man; and hence, so far as humanity was concerned, such changes were matters of chance. But as time has gone on man has entered this field of purposeful direction of the life-force, and his guiding hand is now seen in thousands of definite and predetermined forms of vegetable and animal life into whose present status the element of chance enters not a whit. To such degree is this true that it can safely be asserted that the propagation of plants and the breeding of domestic animals is no longer a matter of chance but one of definite scientific certainty. Here not only have the hopes of discoverers been realized, but the utmost dreams of wild enthusiasts have been surpast.

It is these achievements which lead us to believe that the elimination of chance as a factor in human affairs will progress with the years till it shall disappear altogether. This, in spite of the fact that there are some fields in which it still reigns supreme, even at this late day, and the obstacles which are arrayed against its extermination seem almost insurmountable. In this case comes the cause of the physical maintenance of life for the whole human family. Even the suggestion of eliminating chance from this region of its now almost universal sway meets with a shake of the head from all but a scattered few, and to most it seems impossible, for innumerable and even unthinkable reasons. For the most part, it is today beyond conception that there can ever be established an order of living in which the wholesome subsistence of every human life shall be as assured as the rising of the sun. So far in the future is such consummation that as yet the

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very idea can not be embodied in a name for it, tho attempts to do this have been as many as they have, so far, been futile. And yet, in the eternal working of the principle of chance extermination from the course of human affairs, such condition must some day be reached.

Still further ahead is the cause of eugenics which even to speak of is now almost to mention the forbidden, and one hardly dare ask the question: Will chance ever be cast out from the highest function of human beings, or must souls forever be incarnated at haphazard?

The processes of evolution are so slow, in their tireless workings, that their watchers and noters sometimes grow heartsick; but, from what they have already accomplished, we are warranted in prophesying what they will yet effect. And since man has become a factor in helping to forward evolutionary processes, in so many of the ways in which the life-force manifests itself, it is not too much to maintain that, nature and man working together and in harmony, conditions will some day be established which will make it certain that every soul born into this world shall enter by the gate of definite purpose and assurance rather than at the portal of chance. It must be possible that, sometime, in all the human family, the art of love will be discovered, taught, and acquired, and the science of procreation studied and mastered. Under the persistent working of the principle of chance elimination, the day of the Superman will sometime dawn.

And because these things are so, study and investigation as to the laws that pertain to the growth and betterment of all forms of life, from the lowest to the highest, are strictly in order; and to disseminate a knowledge of such helpful discoveries as may be found, to teach those who come after so that wisdom shall take the place of folly, and "I know" shall supplant "I guess" or "may-be-so" in all the realms of human activity—this is the highest service that any soul can render to the race. Here lies the labor for the original researcher, the teacher, and the schools of all sorts, for the days that are to come.

WM. HAWLEY SMITH

PEORIA, ILL.

VI

LORD MORLEY ON LANGUAGE AND LITERATURE [1]

[As President of the English Association, Lord Morley of Blackburn delivered a few months ago a distinguished address which has been much discust in England. At the request of several readers, the REVIEW is glad to reproduce herewith the report of Lord Morley's address as it appeared in the London *Times*.]

I owe you my warm thanks for the honor you have done me in choosing me to be your President for the year. Along with my gratitude goes a very keen sense that I can contribute nothing to the special educational objects that your association exists to promote. Personally I can not remember that I was ever taught English. At school I once competed for an English prize poem, without success, but not without an encouraging compliment from the headmaster that my heroic poem contained the promise of a sound prose style. I shall not attempt to take a part, tho as a constant learner I can not but take an interest in the various controversial points connected with English teaching that figure in your transactions. They are important, they are full of life, of experience, and of real enthusiasm. They open new problems for what is, after all, if we look at it in all its bearings, the most responsible of professions. It is not for me to instruct teachers in their own arduous business. Whether the teaching of English is over-methodized, whether grammatical terminology should be uniform, whether in English grammar gender should cease to be recognized, or, at any rate, should not be emphasized; whether a sentence containing a subordinate clause is to be called a simple sentence; whether future perfect in the past is the right name for a certain tense—of all these and many others I am sure that they touch points of real

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significance both for scientific analysis of language, and for teaching habits of accurate distinction which mark the difference between slovenly and orderly minds.

THE TEST OF GOOD WRITING

I have heard of one singularly attractive writer of my generation now dead who used to teach his pupils that the true test of good writing lay in the adverbs. Adjectives, he said, usually took you little further than the expression of broad characteristics; it is the adverb that displays the delicacy of the thing, and a precise use of the adverb is the sure sign of a truth-loving mind. This, I admit, strikes me as rather a subtle flavor, but such matters are for experts, and for this afternoon you will allow me to let them slumber. An observation of your secretary's struck me as hitting the real mark of your proceedings. She says of a certain author that he takes us into that atmosphere of beauty, more or less frequent excursions, but which are necessary to help us to endure what she calls the rush of life and the enforced ugliness of much of our surroundings. Grammar, philology, rules of rhetoric are indispensable apparatus. They are a worthy exercise for careful, ingenious, and erudite minds. But all this technic is only a means of access to those treasures of our literature, that in the old famous words are with us in the night, and in the hurry of the prime, stir youth and refresh age, adorn success, and to failure furnish shelter and consolation.

It is no trifling concern that exercises your association, no art of abstruse pedagogic, no pedantry, like Carlyle's favorite example of the fiery grammarian who cried out against his rival, "May Heaven eternally confound you for your theory of the irregular Greek verbs." The case has been explicitly opened at least in one of its parts in the rather startling sentences with which Mr. Hartog some three or four years ago began his excellent little book on the *Writing of English.* The sentences were four—the English boy can not write English, the English boy is not taught to write English, the

French boy can write French, the French boy writes French because he is taught. On Mr. Hartog's plan for applying French methods to English scholastic circumstances, I can venture on no opinion. If there is substance in the first two of his propositions, the significant thing is not merely that the boy can not write and is not taught to write English, but the sort of indifference implied in such a state of facts in the general atmosphere to one of the noblest of tongues, and in these days far the most widely spread and far the most powerful of tongues.

I was asked the other day how many members of Parliament had ever read a page of Milton's *Areopagitica*. I wonder. I would not too confidently answer even for another place. Your object is to get both parents and teachers to shake off this indifference, whatever it amounts to, for it may be that even teachers are not always animated by delight, which among the elect falls little short of passion, for the glorious literature they have to teach. I do not mean that people do not care for books and libraries. The evidence is all decisively the other way. But the library without the school is of as little avail as schools would be without the library. A library is a labyrinthian maze without a clue to one who has never been trained, I will not say systematically, but even in the elements of English language and literature.

ENGLISH AS A UNIFYING AGENT

I called English the most widespread of living tongues. Surely not the least stupendous fact in our British annals is the conquest of a boundless area of the habitable globe by our English language. There is no parallel. You have been told here, I see, that Arabic is or has been our rival. This is a proposition that needs far deeper limitations and qualifications than I can either set forth or examine. Arabic scholars assure me that tho Arabic in Islamic lands for some three or four centuries became the medium for an active propagation of ideas, and tho by the Koran it retains its hold in its own area, and keeps in its literary as distinct from its spoken

form the stamp of thirteen centuries ago, yet there is no real analogy or comparison with the diffusion of English. Latin is a better analogy. Latin was universally spoken pretty early in Gaul, Britain, Spain, and somewhat later in the provinces on the Danube. In the East it spread more slowly, but by the Antonines and onwards the spread of Latin was pretty complete, even in Africa. Greek was common thruout the empire as the language of commerce in the fourth century. St. Augustine tells us that pains were taken that the Imperial state should impose not only its political yoke but its own tongue upon the conquered peoples, *per pacem societatis.*

This is what, among other things, is slowly coming to pass in India. Tho today only a handful, a million or so, of the population use our language, yet English must inevitably spread from being an official tongue to be a general unifying agent. An Englishman who adds to the glory of our language and letters will deserve Cæsar's grand compliment to Cicero, declaring it a better claim to a laurel crown to have advanced the boundaries of Roman genius than the boundaries of Roman rule. Whether Julius was sincere or insincere, it is a noble truth for us as well as for old Rome.

THE HUGE AUGMENTATION OF READERS

Looking at contemporary conditions, what is there to strike us? We can not miss the leading fact that two enormous changes have come to pass within the last two generations. One is the rise of physical science and invention into reigning power thru the whole field of intellectual activity and interest. The other is the huge augmentation of those who know how tc read and who have come under the influence of books. Or shall we say of printed matter? For if we were to judge from the legions who travel by rail, literature means too often books that are no books and only a more or less respectable provision for wasting time. The Headmaster of Eton a year ago told you boldly that we live in an age when there is the greatest abundance of bad literature that ever was known in any country in the world, the cheapest and most accessible

bad literature. On the other hand, it is quite true, and much to the point, masterpieces are now, in cheap form, finding a market in overwhelming numbers. One well-known series, now numbering 500 volumes, has in five years had a gross sale of seven million copies, with no sign of decrease. The world's classics from Oxford count for many of their heroes a sale of 100,000, and an average between 50,000 and 60,000. Let us add that even in the cheapest daily journals no book of serious worth ever goes without a notice, handling it with a degree of competence that not so many years ago was only to be found in half a dozen expensive weeklies. Add on the same side the extension, popularity, and success of public libraries, encouraging as these facts are in every way. Still let us face the unpleasant reflection that if one of the main objects of education must always be to strengthen the faculty of continuous and coherent attention against that tendency to futile and ignoble dispersion which confuses the brain and enervates the will, then are we sure that the printing press, mighty blessing as it is, can not be counted a blessing without alloy.

What is to be the effect upon the great, the noble, the difficult art of writing? The writer of either prose or verse is not, and can not be, independent of surrounding atmosphere and a responsive audience. Even the sublimest genius, whose dawn upon the world seems like an accident, out of all range of knowable cause of condition—even he is carried upon the stream of time and circumstance. We all know how French was shaped into its extraordinary perfection in the social influences of the greatest of French Courts. How will our own English fare amid the swelling tides of democracy? So far, if anybody thinks that some oddities of diction or tricks of affectation in construction, or invention of ugly words or revival of worn-out and inappropriate old ones, that these vicious fopperies show signs of creeping in, it is rather from above than below; for who ought to know better than those who have had little chance of knowing?

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LETTERS AND SCIENCE

This wholesale admission, then, of the principle of universal franchise, male and female, into the world of letters is one mark of our new time. Now let me offer a few words on the effects of the relations of letters and science. We may obviously date a new time from 1859, when Darwin's *Origin of species* appeared, and along with two or three other imposing works of that date, launched into common currency a new vocabulary. We now apply in every sphere, high and low, trivial or momentous, talk about evolution, natural selection, environment, heredity, survival of the fittest, and all the rest. The most resolute and trenchant of Darwinians has warned us that new truths begin as rank heresies and end as superstitions; and if he were alive to see today all the effects of his victory on daily speech, perhaps he would not withdraw his words. That great controversy has died down, or at least takes new shape, leaving, after all is said, one of the master contributions to knowledge of nature and its laws and to man's view of life and the working of his destinies.

Scientific interest has now shifted into new areas of discovery, invention, and speculation. Still the spirit of the time remains the spirit of science and fact and ordered knowledge. What has been the effect of knowledge upon form, on language, on literary art? It adds boundless gifts to human conveniences. Does it make an inspiring public for the master of either prose or verse? Darwin himself made no pretensions in authorship. He once said to Sir Charles Lyell that a naturalist's life would be a happy one if he had only to observe and never to write. Yet he is a writer of excellent form for simple and direct description, patient accumulation of persuasive arguments, and a noble and transparent candor in stating what makes against him, which, if not what is called style, is better for the reader than the finest style can be. One eminent literary critic of my acquaintance finds his little volume on earthworms a most fascinating book even as literature. Then, altho the controversial exigencies of his day affected him with a relish for laying

too lustily about him with his powerful flail, I know no more lucid, effective, and manful English than you will find in Huxley. What more delightful book of travel than the *Himalaya journals* of the great naturalist Hooker, who carried on his botanical explorations some sixty years ago, and happily is still among us?

Buffon, as man of science, is now, I assume, little more than a shadow of a name, and probably even the most highly educated of us know little more about him than his famous pregnant saying that the style is the man—a saying, by the way, which really meant no more than that, while Nature gave the material for narrative, it is man who gives the style. Yet the French to this day count him among the greatest of their writers for order, unity, precision, method, clearness in scientific exposition of animated nature, along with majestic gifts of natural eloquence. And anybody who as orator, preacher, professor, seeks guide and stimulus for trying the grander effects upon an audience might do much worse than read Buffon's long renowned and influential *Discourse on style.* Even less ambitious people will find in it much that is useful and admirable, provided only that we are not drawn to imitate. May I note that Buffon keeps clear of the mortal sin of trying to produce with the instrument of prose effects that are by all the natural laws of language reserved for the domain of poetry, or, in other words, of asking from any art, whether words, color, or form, effects that are beyond its resources. Then comes the greatest of all. Whatever the decision may be as to the value of Goethe's scientific contribution, this, at least, is certain, that his is the most wondrous, the unique case of a man who united high original scientific power of mind with transcendent gifts in flight, force, and beauty of poetic imagination.

THE POETS AND SCIENCE

As for science and the poets, only the other day an attractive little book published by Sir Norman Lockyer shows how Tennyson, the composer of verse unsurpassed for exquisite

music in our English tongue, yet followed with unflagging interest the problems of evolution and all that hangs upon them. Whether astronomy or geology—terrible muses, as he well might call them—inspired the better elements of his beautiful work, we may doubt. An English critic has had the courage to say that there is an insoluble element of prose in Dante, and Tennyson has hardly shown that the scientific ideas of an age are soluble in musical words. Browning, his companion poet, nearly universal in his range, was too essentially dramatic, too independent of the scientific influences of his day, too careless of expression, to be a case much in point. Tennyson said of him, he had power of intellect enough for all of them, "but he has not the glory of words." Whether he had or not, science was not responsible.

I should like to name in passing the English poet who, in Lowell's words, has written less and pleased more than any other. Gray was an incessant and a serious student in learned tongues; and his annotations on the *System of nature,* by Linnæus, his contemporary, bear witness to his industry and minute observation as naturalist. On a page of the first volume he has transcribed some Greek words about our dumb friends. We ought to feel, says Aristotle, no childish dislike at inspecting even the humblest living creatures, for in them, too, dwells something marvelous; I bid you enter with confidence, for even here is the divine. It is pleasant to associate these humanities with the author of the poem, of which I am still bold enough, with your leave, to say that it has for a century and a half given to greater multitudes of men more of the exquisite pleasure of poetry than any other single piece in all the glorious treasury of English verse.

Now let me take a contemporary the other way. Gabriel Rossetti, a true poet, if not a great one, very firmly declared himself not at all sure that the earth really revolved round the sun. He even aggravated this scandalous position by asking, what, after all, did it matter whether it moved or not. But then Rossetti was not like other poets, painters, or plain men. I once happened to meet him on the evening of a general election, and was thunderstruck to find that he was not

aware of the immense event shaking the world around us. He added by-and-by that he did not suppose it made much difference whether Whig or Tory won. A greater poet than himself was with us, and shared the Laodicean humor; I forget who won the election, nor do I recollect exactly what difference it did make, if any.

In prose fiction was one writer of commanding mind, saturated with the spirit of science. Who does not feel how George Eliot's creative and literary art was impaired, and at last worse than impaired, by her daily associations with science? Or would it be truer to say—I often thought it would—that the decline was due to her own ever-deepening sense of the pain of the world and the tragedy of sentient being? She never lookt upon it all as *ludibria rerum humanarum,* the cruel sport of human things. Nor could she dismiss it in the spirit of Queen Victoria's saying to Dr. Benson, about the follies and frivolities of Vanity Fair:—"Archbishop, I sometimes think they must all be mad." The theater was too oppressive for George Eliot. The double stress of emotion and thought, of sympathy and reason, wrought upon her too intensely for art. She could not, as virile spirits should, reconcile herself to nature. It needed all her native and well-trained strength of soul to prevent her, science or no science, from being crusht by the thought in Keats's lines how men sit and hear each other groan, how earth is full of sorrow and leaden-eyed despairs.

HISTORY'S BURDEN OF FACT

Let us look at the invasion of another province by the spirit of the time. The eager curiosity of all these years about the facts of biology, chemistry, physics, and their laws has inevitably quickened the spread both of the same curiosity and the same respect, quickened by German example, for ascertained facts into the province of history. We live in the documentary age. New sources emerge and new papers are daily dragged to light. In the history of Great Britain alone documents are every year brought almost in barrow-loads to the grateful stu-

dent's door. Sacred archives everywhere are being unsealed. Whether all this be new truth or old falsehood not every explorer can be quite sure. But the dilemma is now fixt by fate and literary fashion, which is itself a kind of fate. A fabric of inspiring narrative built on foundations of quicksand, on the one side; on the other, a fearsome jungle of minute detail, every regiment in every battle numbered, every hour accounted for, every turn of diplomatic craft tracked. Is this over-burden of recorded fact a misfortune for modern history? How hard to move with freedom under it! Is the pure scientific impulse—to tell the exact truth with all the necessary reservations—easy to combine with regard for artistic pleasure?

I have been reminded that Renan, who possest both scientific and artistic instinct, somewhere wishes that he could use polychromatic ink, so that he might indicate the subtle shades of doubt that belong to each adjective and adverb. How distracting to the ordinary reader, who loves firm line and bold color! What would have become of the splendors of Carlyle's *French revolution* if he had followed the scale and method of his *Frederick the Great?* It is an interesting guess that a good scholar, familiar with the two ancient languages and with French, could read Gibbon's authorities in five years. The actual mass of print and manuscript thru which Ranke, or Gardiner, must have fought his way can hardly have been less than five or six times as bulky. This is the labor of a lifetime. Form as form is buried alive.

THE PERIL OF THE DOCUMENTARY AGE

Some critics insist that the rarest beauty a style can have is to resemble speech. Others put it in another way, that if you are content to give exactitude to the spontaneous thought, then power and grace enough will follow. Taine says the disappearance of style is the perfection of style. If these schools are right, Gibbon's writing will hardly please, and there have been many whom as style it does not please. Be that as it may, Gibbon's unsurpassed greatness as historian

lies not at all in his selection of words or the fall of his sentence, but in majesty of historic conception, in superb force of imagination, in the sustained and symmetric grandeur of his design. And here is the peril of the documentary age.

The English writer of our own immediate time, with the fullest knowledge and deepest understanding of the fact and spirit of history, would, I think, be pronounced by most critics with a right to judge to be the late Lord Acton. His learning has been called by learned men a marvel. Nor did it ever loosen his hold on practical life, for he was one of the fortunate beings who are all of one piece. His mind, notwithstanding a rather puzzling union within the reserved precincts of theology of submission to authority with his vehement passion for individual freedom, was still a complete whole. May I read to you how Mr. Bryce in 1883 once heard from him late at night in his library at Cannes explain in what wise a history of liberty might be made the central thread of all history? "He spoke for six or seven minutes only; but he spoke like a man inspired, seeming as if from some mountain-summit high in air: he saw beneath him the far-winding path of human progress from dim Cimmerian shores of prehistoric shadow into the fuller yet broken and fitful light of the modern time. The eloquence was splendid, but greater than the eloquence was the penetrating vision that discerned thru all events and in all ages the play of those moral forces, now exciting, now destroying, always transmuting, which had molded and remolded institutions, and had given to the human spirit its ceaselessly changing forms of energy. It was as if the whole landscape of history had been suddenly lit up by a burst of sunlight."

Acton's was a leading case where knowledge and profundity was not matched by form. His page is overloaded, he is often over-subtle, he has the fault, or shall I call it the literary crime, of allusiveness and indirect reference—he is apt to put to his reader a riddle or a poser, and then to leave him in the lurch. When all this is said, even in his severest chapter you will find some of the pregnant, luminous, and stimulating things that are the very heart and soul of good literature.

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It sometimes occurs to me that if those faithful disciples of his were to make a selection of these deep sayings of their master, they would produce an anthology of historic wisdom that might well deserve a favorite place even with the reader whose whole library does not go beyond a couple of shelves. Meanwhile, here is Acton's own account of the historian's direct debt to the methods of science:—"If men of science owe anything to us," he says, "we may learn much from them that is essential. For they can show how to test proof, how to secure fulness and soundness in induction, how to restrain and employ with safety hypothesis and analogy. It is they who hold the secret of the mysterious property of the mind by which error ministers to truth, and truth irrecoverably prevails."

THE QUALITIES OF STYLE

I find in Sir James Murray's Dictionary—a splendid triumph for any age—that I am responsible for having once called literature the most seductive, deceiving, and dangerous of professions. That text demands a longer sermon than your time allows. If any of you reject my warning, impatient as I confess myself of overdoing precepts about style, let me urge you, besides the fundamental commonplaces about being above all things simple and direct, lucid and terse, not using two words where one will do—about keeping the standard of proof high, and so forth—let me commend two qualities—for one of which I must, against my will, use a French word—Sanity and *Justesse.* Sanity you know well, at least by name. *Justesse* is no synonym for justice; it is more like equity, balance, a fair mind, measure, reserve. Voltaire, who, whatever else we may think of him, knew how to write, said of some great lady: "I am charmed with her just and delicate mind; without *justesse* of mind there is nothing." You must curb your ambition of glory, of writing like Carlyle, Macaulay, Ruskin. You must take your chance of being called dry, flat, tame. But one advantage of these two qualities is that they are within reach, and grandeur for most of

us is not. And with this temper it is easier to see the truth, what things really are, and how they actually come to pass.

I had noted one further admonition, but opening Mr. Ker's two little volumes of Dryden's prefaces, for which we owe the editor a debt, I came on Johnson's account of Dryden's prose, far better worth your pondering than anything I could say:— "Dryden's prefaces have not the formality of a settled style. The clauses are never balanced, nor the periods modeled; every word seems to drop by chance, tho it falls into its proper place. Nothing is cold or languid; the whole is airy, animated, and vigorous; what is little is gay; what is great is splendid. Everything is excused by the play of images and the spriteliness of expression. Tho all is easy, nothing is feeble; tho all seems careless, nothing is harsh; and tho since his earlier works more than a century has past, they have nothing yet uncouth or obsolete." This contains both true criticism and good guidance.

Nobody here will undervalue criticism, or fall into the gross blunder of regarding it as a mere parasite of creative work. If there be such a person, may I commend him or her to a very modest volume by Mr. Saintsbury called *Loci critici,* containing passages to illustrate critical theory and practise from Aristotle downwards. For those whose appetite may grow as they eat, the same editor's history in three volumes of *Criticism and literary taste in Europe,* from the earliest texts to the present day, is a striking monument of literary enthusiasm, vastly extensive learning, and much good suggestion. I need not recall how criticism has been defined —the endeavor in all branches of knowledge—philosophy, history, art, science—to see the object as it is in itself.

Mr. Courthope's *History of English poetry,* now completed, is full of value to the student and of lively interest to all the better kind of general reader. A new history of the literature of the Victorian era is of rather special interest to me personally, because it was my truly happy fortune to be the friend, and in many cases the intimate, of most of the later writers whom Professor Walker so skilfully and conscientiously commemorates. Of Mr. Sidney Lee's inces-

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sant and admirable toil, why need I speak, or of the other well-known workers in the field of English letters? Such a body of criticism is infinitely useful for the present of literature and of good promise for the future.

LITERATURE AND LIFE

A graceful French description of what literature means in certain of its types is worth hearing:—"The man of letters is a singular being; he does not look at things exactly with his own eyes; he is not the creature of his own impressions; he is a tree on whom you have grafted Horace, Virgil, Dante, Milton, Shakspere, and the rest, and hence grow flowers not natural, yet not artificial. Of all the mixt colors he makes for himself a color of his own; from all the glasses thru which his eyes pass to the next world, there is fused a peculiar tint, and that is the imagination of the man of letters. If he has genius all these memories are dissipated by the energy of his personal gift."

You will think this too fastidious, too enervating, too dilettante; so it is, if it were taken for the whole story. We must add the saving counsel of Cicero—who has himself been called the greatest of all men of letters. You must always take care to end by exposing yourself to contact with men, and trying your strength in the struggles of life. Yes, that is the end of books and everything. You remember the jest in one of Goethe's verses: how a stubbornly secluded student was once induced to go to a grand evening party. They asked him how he had enjoyed himself. "If they had been books," he answered, "I would not have read one of them." Without being sworn devotees of evening parties, we are sure the gruff sage, if he ever existed, must have been so out of touch with his fellow-creatures and their action, *votum, timor, ira, voluptas,* that he had read his books to little purpose after all.

There were some interesting and good-natured observations in the *Times* a few days ago about the decline in the eloquence of our modern prose. It is unhappily impoverished,

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the writer says; it is not rich in expressing some of the noblest experiences of the human mind and heart. Grand prose, it may be true, is not heard in debate or in the pulpits, and hardly abounds in the exercises of historian, critic, or biographer. Assuredly we can not envy the man whom high passages of our classic prose—Sir Thomas Browne, Raleigh, Bacon, Hooker, Burke, the last of them notably in the Address to the King—do not affect with something of the same swell of emotion as comes from soul-inspiring verse. But grand prose comes from supreme issues, earnest convictions, eager desire to convert and persuade, sublime events, passionate beliefs—these are what move to eloquence at its highest. Lincoln was no scholar, but the Second Inaugural is not to be surpassed, and I remember a passage of Cobden's about the Irish famine that is a masterpiece of eloquent feeling on that fateful tragedy.

Where the themes and issues are those of scientific truth, that prose should be unemotional is natural. Everybody knows Darwin's own account, how, as the laborious years past, he so lost his taste for poetry that he could not endure to read a word of it, Shakspere became so dull it nauseated him, and music set him thinking too energetically on what he had been working at, instead of giving him pleasure. If all this loss was the price of years of fruitful concentration in the master, who can wonder if the scientific and documentary age is an age of prose. Still I hope it is not too pontifical of me to say that I believe I see in the room tonight men who write prose as firm, as delicate, as easy, as pure, as the heart of man could wish.

ENGLISH IN AMERICA

After what has been said of its spread over the globe, we can not be indifferent to the fate of our language across the Atlantic. Emerson, that most lovable of our teachers, once said: "We have listened too long to the courtly muses of Europe." But I remember an afternoon long ago at Washington with Walt Whitman, when he made particularly light

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of Emerson, and was all for packing off the courtly muses, European or Bostonian, bag and baggage. America has not followed this felonious purpose—George Meredith used to say that the high-water mark of English prose in our day was to be found in some pages of Charlotte Brontë, and some of Hawthorne's *Marble faun.* It will be no hard labor to seek out such pages for yourselves. I need not mention Lowell, and a dozen more Americans, grave and gay, who are the living delight of English readers. American novelties in the way of picturesque and unexpected diction, so piquant and effective in colloquial use, have not yet lowered the standard of writing or oratory.

In the new edition of his famous book Mr. Bryce gives us a glowing account of what is being done, not only by American workers in every branch of science, but by American scholars; how admirably thoro and painstaking their scholars are, how keen to overtake Germany, and how they are even betrayed into the German fault of indifference to form and style—no brilliant personalities in letters or art; but is this not true of Europe too? Perhaps, he says, the world is passing thru an age with a high level of mediocrity as compared with the outstanding figures of the last century.

THE VACANT LITERARY THRONE

There is, we must admit, today no monarch in any tongue upon the literary throne, no sovereign world-name in poetry or prose, in whom—as has happened before now not so many generations ago, in royal succession, to Scott, Byron, Goethe, Victor Hugo, Tolstoy—all the civilized world, Teuton, Latin, Celt, Slav, Oriental, are interested, for whose new works it looks, or where it seeks the gospel of the day. *Nabochlish,* to use an Irish word that became a favorite with Sir Walter Scott; it does not matter. Do not let us nurse the humor of the despondent editor, who mournfully told his readers, "No new epic this month."

Nobody can tell how the wonders of language are performed, nor how a book comes into the world. Genius is

genius. The lamp that today some may think burns low will be replenished. New orbs will bring light. Literature may be trusted to take care of itself, for it is the transcript of the drama of life, with all its actors, moods, and strange flashing fortunes. The curiosity that it meets is perpetual and insatiable, and the impulses that inspire it can never be extinguished.

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VII

CURRENT EDUCATIONAL PUBLICATIONS [1]

Bliss, W. F. History in the elementary schools: methods, courses of study, bibliographies. New York, Chicago [etc.] American book company [1911] 214p. 12°.

Bryan, Elmer Burritt. Fundamental facts for the teacher. Boston, New York [etc.] Silver, Burdett and company [1911] 111p. 8°.

Chapin, Francis Stuart. Education and the mores; a sociological essay. New York, Columbia university, Longmans, Green & co., agents; [etc., etc.] 1911. 106p. 8°. (Studies in history, economics, and public law, ed. by the Faculty of political science of Columbia university, vol. XLIII, no. 2)

Claparède, Édouard. Experimental pedagogy and the psychology of the child. Tr. from the fourth French ed. by Mary Louch and Henry Holman. New York, Longmans, Green and co., 1911. 332p. 12°.

A simple, comprehensive, and scientific work on child study, which should help teachers in the schoolroom and parents in the home.

Colvin, Stephen Sheldon. The learning process. New York, The Macmillan company, 1911. xxv, 336p. 12°.

An attempt to analyze the fundamental conceptions and facts relative to the learning process, and to show their significance by discussion and illustration as it appears in theory and practice in instruction in the elementary and the secondary schools. A wider application also has been made in so far as these theories and facts have been considered in relation to the learning of the mature student and in the conduct of the affairs of daily life.

Consumers' league of Connecticut. A glance at some European and American vocational schools for children from twelve to sixteen years of age. Hartford, Consumers' league of Connecticut, 1911. 64p. illus. 8°.

The result of an investigation of some schools in Germany, Belgium, Holland, England, and the United States, made by the Consumers' league of Connecticut, September 1909-February 1910.

Ferguson, Charles. The university militant. New York and London, M. Kennerley, 1911. 184p. 12°.

The author is a member of the New York bar, is an editorial writer, and was one time rector of St. James' church in Syracuse. His book, says the Dial, September 1, p. 137, "is a plea for making higher education more productive of good to humanity at large. The university should remodel itself on the twelfth century pattern of 'a self-governing commonwealth'."

[1] Compiled by John D. Wolcott, specialist in charge of the Library of the United States Bureau of Education, to which books and pamphlets should be sent for inclusion in this record.

Frost, J. M. The school of the church; its pre-eminent place and purpose. New York, Chicago [etc.] F. H. Revell company [1911] 193p. 12°.

Groos, Karl. Das seelenleben des kindes. 3. umgearb. u. verm. aufl. Berlin, Reuther & Reichard, 1911. 334p. 8°.

Ladd, George Trumbull. The teacher's practical philosophy; a treatise of education as a species of conduct. New York and London, Funk & Wagnalls company, 1911. 331p. 12°.

The author emphasizes the personal and moral elements as those which, broadly understood, must be relied upon to secure needed improvements in our system of education.

New York (State) Education department. Forests of New York. New York state education department, Arbor day annual, May 5, 1911: comp. by George Martin Wiley. Albany, Education dept., 1911. 53p. illus. 4°.

"Reference list on forestry books," p. 52-53.

Offner, Max. Das gedächtnis. Die ergebnisse der experimentellen psychologie und ihre anwendung in unterricht und erziehung. 2. verm. aufl. Berlin, Reuther & Reichard, 1911. xi, 258p. 8°.

——. Mental fatigue; tr. by Guy Montrose Whipple. Baltimore, Warwick & York, 1911. viii, 133p. 8°. (Educational psychology monographs)

Prettyman, Cornelius William. The higher girls' schools of Prussia. New York city, Teachers college, Columbia university, 1911. 59p. 8°. (Teachers college record, vol. 12, no. 3)

Schroeder, Hermann H. The psychology of conduct applied to the problem of moral education in the public schools. Chicago, Row, Peterson & company [1911] 287p. 12°.

The chief concern of this book is to trace conduct to its sources, and to show briefly how the principles evolved may be applied to the actual work of teaching.

Starch, Daniel. Experiments in educational psychology. New York, The Macmillan company, 1911. vii, 183p. illus. 12°.

Designed to serve as a guide for laboratory experiments in educational psychology.

Stuart, Janet Erskine. The education of Catholic girls. London, New York [etc., etc.] Longmans, Green and co., 1911. xv, 243p. 12°.

Talkington, H. L. Political history, state constitution, and school laws of Idaho. Lewiston, Idaho, Lewiston morning tribune [1911] 122p. front., plates. 8°.

Thwing, Charles Franklin. Universities of the world. New York, The Macmillan company, 1911. xv, 284p. front., plates. 8°.

Describes twenty institutions of the Eastern hemisphere.

Van Biervliet, J. J. Premiers éléments de pédagogie expérimentale. Les bases. Gand, I. Vanderpoorten [etc., etc.] 1911. 335p. 8°.

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VIII

REVIEWS

Administration of the college curriculum—By WILLIAM T. FOSTER. Boston: Houghton Mifflin Company, 1911. 390 p., with index. $1.50.

President Foster's book begins with a clear historical summary of the early days of American college education, and then deals in considerable detail with the influence of Thomas Jefferson in molding the University of Virginia with the basal conception that it is impossible to teach even the elements of all branches of knowledge to any one student, and that the student himself can be trusted to select what he needs. It appears from the author's researches that Jefferson was strongly influenced in his decision by the example of the University of Edinburgh and probably not at all by the German universities. He goes on to show that George Ticknor, who was the prophet of the elective system at Harvard, received his inspiration not from his residence at Göttingen, as has generally been supposed, but from Thomas Jefferson, with whom Ticknor was in close touch during the organization of the University of Virginia and from whom he received an offer of a professorship in that institution.

The general breakdown of the prescribed course at Harvard is treated in detail and is followed by a summary of the subsequent steps in the same direction at other colleges. The table, in bald outline, of the natural progress of the elective system at Bowdoin, gives a vivid picture of "how the elective principle edged its way into the curriculum and inch by inch drove the prescribed studies back, and at the same time shows the almost accidental way in which the curriculum evolved."

Thus far the book has been historical in treatment. The second half is entitled "Critical." Its first chapter contains tables showing the exact requirements for the A.B. degree in

ninety-two different American institutions—a task the magnitude of which can only be appreciated by those who have had occasion to decide what college catalogs really mean from what they actually say. The differences in the proportion of prescribed work are enormous, swinging in the State universities from 5% at Wyoming to over 60% at Alabama. The author next deals with the present fetish of college faculties, the elaboration of schemes for appropriate automatic condensation and distribution of studies, and again gives evidence of his devotion by presenting tables giving the actual requirements in the above-mentioned institutions. A valuable comparison is made of the 1910 Harvard scheme with the actual programs of the class of 1909 at Bowdoin, where President Foster served as professor. The following chapter deals with the relation between college studies and success in life, and is drawn mainly from the recent studies of the programs of Harvard graduates, notably President Lowell's comparison of the work of the same men in undergraduate and professional study and the report of the class of '94. A chapter is then given to the desirability of considering the quality of student work, as well as its quantity, in which, strangely enough, no mention is made of the fact that at least two large universities, Chicago and Columbia, have in actual operation schemes for extra credit for high standing and corresponding penalties for low passing grades. The author's only reference is to the experience of the University of North Dakota, where the plan was first tried, but where it was abandoned after a few years. In President Foster's judgment, the adoption of this principle must await a more scientific system of college grading, and he devotes the longest chapter of his book to this problem. It is copiously illustrated by tables and curves, and shows how far the present markings vary from the logical curve (which would divide the grades about as follows: A-6 per cent, B-15—21, C-45—55, D-20—28, E-6—10). The University of Missouri has been the pioneer in this matter and its students are now graded in accordance with scientific principles. Other institutions whose intelligent study of the question is commended are Williams College and the University of

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Iowa. The closing chapter deals summarily with some of the principal conditions affecting the administration of the college curriculum: athletics and athleticism—the scramble for numbers and its influence on special students, scholarships, etc. And, finally, given in four pages, we have the author's conception of the ideal college.

This summary shows how much valuable material the book contains and that it is based on laborious, first-hand study of actual records. The author has received the distinguished compliment of being selected to organize the well-endowed Reed College in Portland, Oregon. His book is written simply and vigorously and with evident sincerity. It is so good that one feels a perhaps irrational disappointment that it is not better and that it fails to offer a thoroly satisfactory solution of the problem of making a book for general consumption out of a Ph.D. dissertation. Judged as the former, it does not seem to hang together properly, and with the exception of the definite argument for scientific marking, it hardly seems to get anywhere. It is open to question whether President Foster has analyzed in his own mind the two factors which the so-called elective system involves, i.e., the assumption that the whole field of knowledge is too wide for any single student, an assumption which needs no defense, and, secondly, the question whether the student is to make the selection wholly for himself, or if not, how far the college is to make it, and whether directly by prescriptions or indirectly by groups.

The question of Jefferson's indirect influence on Harvard and the elective system is undoubtedly interesting historically, but it is only incidental to the whole question which the author is treating, and its inclusion in detail tends to throw the book out of scale. There are, on the other hand, rather surprising gaps. For example, it is at least as important to get good teaching as to get correct marking, and one might expect a graduate of Teachers College to have dealt with the possibility of professional training for college teaching. Further, if President Foster did not care to discuss himself the problem of how the administration is to be conducted, he might, at any rate, have referred to President Eliot's book

as a guide to the inquirer. Another field practically untouched is that of the personal relationship between officer and student. This is today receiving careful consideration at many institutions, and there are not a few who believe that satisfactory college programs are more likely to come thru the development of such relations with the individual rather than by any legislation for the mass.

FREDERICK P. KEPPEL

COLUMBIA COLLEGE

Records of the Federal Convention of 1787—Edited by MAX FARRAND, Professor of History in Yale University. New Haven: Yale University Press, 1911. 3 vols. $15.00.

The secret sessions of the Federal Convention of 1787 are in striking contrast with the public debates, the crowded galleries, and the turbulence of the French Constituent Assembly of 1789, which made the first French constitution. Indeed, it was many years after the adjournment of the American Convention before authoritative knowledge of what had transpired behind closed doors at Philadelphia reached the public, tho it is true that in the course of debates in the state conventions which ratified the Constitution some information relative to the secret proceedings at Philadelphia leaked out. It was not till 1818 that Congress ordered the journal and minutes which had been kept by the official secretary of the Convention to be printed. The secretary, however, had been incompetent, and his papers proved inadequate and unsatisfactory. Nevertheless, the journal, meager as it was, was printed in 1819, under the editorship of John Quincy Adams. Two years later the notes which had been taken in the Convention by Yates, one of the New York delegates, were published at Albany, the first of a series of unofficial records to be made public, which far surpass the official journal in value. Madison, who had kept a full record of the proceedings of the Convention, died in 1836, and four years later an edition of the *Papers of James Madison* in three volumes was published, edited by Gilpin, of which more than half was devoted to notes taken in the Con-

vention. "At once," observes Professor Farrand, "all other records paled into insignificance." These notes, indeed, constitute our chief authority for the work of the Convention. The editor of the present work shows, however, that, as printed by Gilpin, Madison's notes are not always trustworthy. Gilpin took some liberties with the manuscript, and, what is more important, it is certain that Madison himself revised his own notes after the publication of the journal in 1819, and in some cases made material alterations in them. Since the printed journal is not always reliable, it is not surprizing to find that Madison sometimes "corrected" his own statements so as to bring them into harmony with erroneous statements in the journal. In 1900 Madison's "Debates" were reprinted in the *Documentary history of the constitution,* in such a way as to indicate the changes which he had made in his own manuscript. In this edition, however, it is impossible to distinguish between corrections made by Madison in the text at the time of first writing, and emendations made years later. Most of the latter, the editor of the present work points out, are easily recognizable in the manuscript since they were made in ink which has faded differently from that used when the notes were first written. In the present edition Madison's later alterations are indicated by brackets. This is, of course, a matter of some importance, because when he copied from the journal his statements can not be considered of primary authority.

"In view of the fact that the journal is so imperfect and not altogether reliable," says the editor, "and that Madison made so many changes in his manuscript, all other records of the Convention take on a new importance." Among the more important of such other records are the notes of Robert Yates, Rufus King, James McHenry, and William Paterson. The first two volumes of the present work contain all the notes taken by members of the Convention which have come to light, arranged in chronological order, day by day. First in each day's records comes the journal, not reprinted from the edition of 1819, but taken directly from the original manuscript of the secretary's minutes. Next comes Madison's record for the

day, followed by any notes for that day which may have been left by other members of the Convention. There is some reason for believing that further memoranda, of which at present we have no knowledge, were made by members, and that these may some day be discovered, tho it is improbable that they would add much to our knowledge of the Convention's work.

Most of the third volume is devoted to what are called "supplementary records." Under this designation the editor includes letters written when the Convention was in session by delegates to their friends, which throw light on the proceedings, and statements made by delegates after the adjournment of the Convention, in state ratifying conventions, in Congress, in private correspondence—in fact wherever found, if they convey information of the Convention's work. Discussions of the meaning of the various clauses in the Constitution, if they give no inside information of the Convention's intentions or acts, are not included, even if carried on by members. The editor admits the practical impossibility of making a collection of material of this nature complete, and "has accordingly confined his efforts to the more obvious and accessible sources." The principle of inclusion and exclusion followed, however, is not always clear. For example, an extract from the writings of Jefferson, in which he refers to proceedings in the Convention, is given, tho Jefferson must have acquired his knowledge at second hand, since he was out of the country when the Convention was in session. When, however, Roger Sherman, a member of the Convention, in debate in the House of Representatives in July, 1789, said, "The provision for amendment made in the fifth article of the Constitution was intended to facilitate the adoption of those which experience should point out to be necessary," he was making a statement which should certainly be classed as a "record," tho it is not included by Professor Farrand. To determine whether or not a given statement made by a member of the Convention is a record sometimes involves a very nice discrimination. To illustrate: The House of Representatives in 1789 debated with great earnestness the

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question whether the concurrence of the Senate was necessary in the case of removals from office. Madison, who strongly exprest the view that the Constitution vested this power in the President alone, declared that the interpretation of his opponents would make the Constitution inconsistent with itself. "I can hardly bring myself to imagine the wisdom of the Convention who framed the Constitution contemplated such incongruity." If Madison here is merely commenting on the Constitution the editor has properly excluded the extract; if, on the other hand, he is speaking as a member of the Convention, with personal knowledge of its intentions, it should be included. Taken as a whole, these "supplementary records" throw much valuable light on the acts and intentions of the Convention, and show that the editor has done much searching in the more accessible sources.

The most serious defect in Professor Farrand's work is the inadequacy of the general index. One of his purposes, he tells us in the preface, has been "to gather all of the available records into a convenient and serviceable edition." Whether this edition will prove convenient and serviceable or not depends chiefly upon the index, and no pains should have been spared to make it subserve the needs of those who will turn to this work for knowledge of the proceedings of the Convention. It has been very badly constructed, the editor's assertion that he has tried to make it exhaustive to the contrary notwithstanding. It contains such comparatively useless items as "Ireland," "France," "Spain," "George II," but it will be searched in vain for the words "senator," "slavery," "representation," "apportionment," "export duty," "naturalization," and many others equally important. Suppose, for example, that one wishes to learn what was said in the convention about export duties. In the general index he finds no indication that the subject was discust. There is, however, another index, an "Index by clauses of the constitution," which will enable him to trace the evolution of particular clauses. But in order to use this with any facility he must remember precisely what clause of the Constitution prohibits the imposition of export duties; otherwise he must spend a long time

searching for it. There is absolutely no excuse for publishing a large work of references without a proper alphabetical index, and the want of one seriously impairs the value of what Professor Farrand has done.

Students of the formation of the Constitution may perhaps regret, tho they will have no right to make their regret an objection, that the editor has not seen fit to write an introductory sketch of the Convention's work. Some of his views on the Constitution, it is true, have already been given to the public in short papers. In fact, the brief introduction in the first volume of the present work, which evaluates some of the more important records, is merely a condensation of an article written by himself several years ago. In appendixes to the third volume, some of the "plans of government" submitted by delegates in the Convention are printed, and here the editor has made an interesting attempt, in which he has been assisted by the ingenuity of other scholars, to reconstruct the lost "Pinckney plan." In the main body of the work, however, the material is left to speak entirely for itself, save for footnotes which relate mainly to textual questions. No attempt is made to explain or interpret. The editor's primary concern has been to publish the records "in trustworthy form," and here he has done excellent work.

ROBERT L. SCHUYLER

COLUMBIA UNIVERSITY

A cyclopedia of education—Edited by PAUL MONROE with the assistance of Departmental Editors and more than one thousand individual contributors. Volume I, Abacus to John Chrysostom. New York: The Macmillan Company., 1911. 654 p. $5.00 each. By subscription only.

It is nearly thirty years since Kiddle & Schem published the first *English cyclopedia of education,* complete in one volume. The great *German cyclopedia,* by Rein, in seven volumes, was completed in 1899. Ten years is a very long time when chronicling the progress of the comparatively new science of education. This new *Cyclopedia of education,* therefore, will be welcomed by English readers. The editor has achieved an enviable position in the educational world by his scholarship,

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capacity, and thoroness. The departmental editors, numbering fifteen, are, with the exception of seven, occupants of the chair of pedagogy in their respective universities. The exceptions are Elmer E. Brown, Gabriel Compayré, John Dewey, and David Snedden, who have been closely identified with departments of pedagogy. The remaining three departmental editors are J. E. G. De Montmorency, assistant editor, *Contemporary review,* London, England; Arthur F. Leach, charity commissioner for England and Wales, and Miss Anna Tolman Smith, specialist, Bureau of Education, Washington. The departmental editors have thus been very wisely selected for the work devolving upon them. The form, shape, and typographical appearance of the volume in hand reflects credit upon the publishers.

The scope of the work, the character of the contributions display the care, research, and acumen of the scholar. Each article is signed with the initials of the author, thus giving it a special value to the reader. Personally, I feel that it would have been better were these articles signed in full, the plan adopted in Rein's great work, as I find myself forced to refer back to the title page quite frequently to identify the initial signature. Cyclopedia construction is not yet standardized sufficiently to speak confidently of what seems weakness in the plan and execution of this great work. The absence of an index to the individual articles, while in accordance with prevailing custom, will hardly be approved by readers.

The very excellent biographical section includes many names whose work is entirely unrelated to any real phase of the science of education. Their selection exemplifies one of the weak sides of the research method. When the same space, three pages, is devoted to Chesterfield that is given to Aristotle, when more space is given to Catherine Beecher as an educator than to President Barnard of Columbia University, one fails to grasp the reasons for such conclusions. The articles describing the Abacus, the eight pages devoted to academic costume, the page devoted to amateurism as applied to athletic sports, are apparently out of place in such a cyclopedia. Other seeming anomalies appear when one dis-

covers that athletics requires a treatment in twenty-six pages, while art in education, in a very much padded article, is given only twenty-three pages, and adolescence and youth the space of six pages. Two very excellent contributions—the one on apprenticeships and education is treated in twelve pages; the other, a very scholarly article on archeology, in nineteen pages—are indications of lack of regard for the relative value of topics as well as confusion resulting from an incorrect view of the difference between a cyclopedia and a textbook.

Scanning the pages, too, one finds more or less elaborate treatment of topics which belong more properly in a medical dictionary. One, too, may question the policy of placing in a cyclopedia of education a discussion or definition of allocheria, articular sensation, bashfulness; yet Rein, on the other hand, treats cholera and typhus fever somewhat lengthily. One, too, can not but be dissatisfied with the space devoted to such topics as Albany, Arkansas, Alabama, the subject-matter of which is practically obsolete by the time it is printed. Nevertheless, the editor has produced a volume which is indispensable to the scholar, teacher, or administrator who desires to keep in touch with education. As education rears itself into the group of sciences, it becomes more and more difficult for even an expert in some of its phases to feel certain about many topics connected with the science of education, which his training has not fitted him to completely apprehend. To such experts this cyclopedia offers relief from anxious moments and wasted energies. For English readers this cyclopedia is preferable to Rein's great cyclopedia, and should have a large and increasing use.

FRANK A. FITZPATRICK

BOSTON, MASS.

Government and politics in the United States—By WILLIAM B. GUITTEAU. Boston: Houghton Mifflin Company, 1911. vii+473+xxxvi p. $1.00.

That the study of civics has made such rapid progress in the past few years stands out as one of the most hopeful mani-

festations of a quickening public spirit. A more or less vague patriotism our schools have always inculcated; but they now recognize the obligation to provide a training which will enable citizens to discharge their responsibilities competently. There is good reason for this. Not only must we familiarize immigrants with our institutions. It is also necessary, in view of our elaborate machinery of government and complicated political practises, that the voter—like the engineer or doctor—should not start his career without some training. Some practical, concrete information he ought to have.

Dr. Guitteau's book is admirably practical; he is a believer in what is usually called "applied civics." The greater part of the book deals with the actual operations of government. Attention is naturally given to the procedure of legislative bodies. There are chapters (which ought to have been somewhat longer) on political parties and elections. Particularly commendable is the lucid treatment of such subjects as state finance, crime, currency, public charities, and the control of economic interests. Naturally the writer is much restricted in a book of five hundred pages, but sound judgment is almost everywhere displayed in the selection of facts and in the allotment of space. The chapter on the monetary system, opening with some fundamental statements as to the origin and functions of money, takes up the history of our currency, deals fairly with the controversy over bimetallism, describes the evolution of our banking system, and discusses the legal tender acts—all within the compass of sixteen pages. In the same way the chapter on crime treats satisfactorily, in nine pages, of such various matters as wrong-doing in primitive society, the definition and classification of crime, its causes, its prevention, its repression (including the spread of enlightened reformatory ideas), and criminal procedure. In a word, Dr. Guitteau possesses those rare but essential qualifications of the writer of school textbooks, a sense of proportion and simplicity and brevity of style.

Pains have been taken to bring the subject-matter abreast of the most recent changes. Thus the establishment of female suffrage in the State of Washington last year and the changes

in the rules of the House of Representatives in March, 1910, are noted. Nevertheless, the remorseless march of events, the ceaseless movement of our political life, has already begun to impair the reliability of the book. Even within two or three months of its appearance the rules of the House were radically changed and the federal circuit courts abolished. Decisions of the Supreme Court have given new meaning to the Sherman Anti-trust Act. One is reminded of the experience of a professor of politics who wrote an article on direct primaries. While he was writing it the State of Illinois enacted a new primary law; when he had got the article in type and the galley proof had come back, the supreme court of the state had declared the law unconstitutional; and by the time the article was in print the legislature had re-enacted the law. Under such circumstances politics is difficult to write about and still more difficult to teach. Every conscientious teacher must bear the burden of watching the experiments of forty-nine legislatures and the decisions of the various state and federal courts. The burden can be lifted only by the publication of a periodical leaflet designed as a supplement to the text-book or by a similar service performed by one of the educational magazines.

As to the general plan of the book there will be some difference of opinion. Why should the inverted order of arrangement (local, state, national) be employed? Some teachers have endorsed it. Thereby the student is supposed to come first into contact with the familiar things about him, with the facts of his daily life. There is little more to say for a plan that ignores the habits of mind of a people who regard themselves as a single nation; whose government, forced by the steady centralization of industry, is constantly extending its activities; and whose political life springs, not from the local governments, but from a national constitution. In the first half of his book, Dr. Guitteau merely alludes to the Constitution a couple of times. Only, as it were, in the fifth act, and by way of creating the proper dramatic effect, does he reveal it fully upon the stage, doubtless much to the astonishment of those who do not know the argument of the play and who

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suppose up to that time that there are forty-eight American peoples instead of one.

The value of the book is enhanced by the facilities provided for further investigation. The bibliographies and suggestive questions, which appear at the end of each chapter, will be useful to teachers as well as students; for it is well known that, since our universities have been slow to provide practical courses in government, many of the teachers are without special preparation in the subject and must be largely dependent on the guidance of their textbook. The teacher will also profit by the list of illustrative material which is given in an appendix. Maps of election dictricts, ballots, and tally-sheets, nomination petitions, tax-rolls, and the Congressional Directory are all very illuminating; and it is useful to know that price lists of government publications may be had from the superintendent of documents at Washington.

The numerous illustrations have been chosen with the idea of vitalizing to the student the functions of government. Among the sixty-odd photographs one finds the dial of a voting machine, irrigation works in Nevada and Wyoming, a road before and after macadamizinig, a dairy car, stages taking children to an Ohio township school, etc. A facsimile of the first gerrymander is given. Statistics which otherwise might be meaningless or soon forgotten are imprest upon the mind by diagrams, a method which does much to elucidate such a difficult subject as state finance.

Dr. Guitteau is superintendent of schools in Toledo; but his material has been selected in such a way as to make the book suitable for use in any part of the country.

E. M. Sait

Columbia University

Manual of mental and physical tests—By Guy Montrose Whipple. Baltimore: Warwick and York, 1910. 534 p. $2.50.

In this volume we have essentially what its title and subtitle would imply, "a book of directions compiled with special reference to the experimental study of school children in the laboratory or classroom."

In three introductory chapters the author gives careful and concise directions for the conduct of tests, and a brief exposition of the meaning and treatment of the statistical formulæ in common use. While clear and simple, this part of the book would need much elaboration for actual work with students. It is unfortunate that typographical errors here have escaped the proof-reader, for instance in table I on page 10, which is used in illustration in several later explanations. The demonstration of how to obtain the Pearson coefficient of correlation (p. 30) is rendered unnecessarily confusing by the quotation of one of these glaring errors.

The main part of the book, chapters IV to XIII, is devoted to descriptions of 54 selected tests, more than half of them on intellectual functions, such as attention, suggestibility, association, memory, range of information. Adaptations of the De Sanctis and the Binet-Simon Graded Tests are included. The treatment in this part is uniformly: (1) description of apparatus, materials, etc., often accompanied by a cut; (2) detailed instructions as to method of administering the test; (3) treatment of results (where necessary); (4) norms of results; (5) references. It will easily be seen that even apart from laboratory use of the Manual, the careful work in (4) and (5), as above, is alone most valuable as a means of ready reference. Here are given brief outlines of the results of similar investigations to date in Germany, France, England, and America, classified, compared, and occasionally criticized. The references given form a useful, and heretofore much needed, compilation.

The volume is rendered still more practical by good indexes and lists of materials and appliances. While not aiming to be a complete and final system, it does present a most usable and suggestive standardized program of work.

M. T. Whitley

Teachers College
Columbia University

School and reference libraries generally will find it worth while to have on their shelves the new *International year-*

book. The latest issue is that for 1910, which offers a succinct summary of the world's progress during that year. We may call particular attention to the sketch of the late Mark Twain, accompanied by an admirable photograph; to the map of New Mexico; to the long and well illustrated article on the Panama Canal; to the article on physics; and to that on polar research. (Dodd, Mead & Co., 1911. 837 p. $5.00.)

We welcome with marked pride this new evidence of our American scholarship, *The historical atlas,* by Professor William R. Shepherd of Columbia University. The book is absolutely indispensable to the reader and student of history, and to the well furnished library. The maps are numerous and well chosen, and they are exceptionally well made. In a number of cases, such as the map illustrating the growth of Savoy and that illustrating the dismemberment of the Ottoman Empire, information of great value and interest is conveyed in striking form. The industrial maps of England are also capital, as are the maps showing the treaty adjustments in the Nineteenth Century. The book is the best of its kind, which is saying a good deal. (New York: Henry Holt & Co., 1911. 216 maps. 94 p. $2.50.)

Professor Ladd, whose active pen is constantly engaged on books of importance, has just published a little volume entitled *The teacher's practical philosophy,* which represents the subject-matter of his lectures delivered a few years since before the numerous audiences in Japan, Corea, and Hawaii. The book is a compend of the practical applications of Professor Ladd's well-known philosophical views, and is distinctly valuable. (New York: Funk & Wagnalls Company, 1911. 331 p. $1.25.)

An exceedingly interesting book of travel and of adventure is *A search for the apex of America,* by the well-known mountain climber, Miss Annie S. Peck. The book deals with very little known regions, and is as fascinating as a novel. (New York: Dodd, Mead & Co., 1911. 370 p. $3.50.)

IX

NOTES AND NEWS

The New York Board of Education

It is a satisfaction to be able to record the fact that the proposed new charter for New York City has failed to pass the legislature, and that, therefore, the disastrous revolution proposed in the administration of the school system has, for the time being at least, been averted. Under the pressure of the strong opposition to the proposal to establish a paid school board, those responsible for the charter gave way at the last moment sufficiently to substitute for a paid school board of five members an unpaid school board of fifteen members with a president who was to be paid a salary of $15,000 a year. This proposal was even more ridiculous than the original one, and indicated plainly the intention to establish a job for a particular individual.

As a valuable contribution to the literature of this discussion, we reproduce here a letter addrest to the New York *Evening Post,* while the charter was still pending, by Mr. S. H. Olin of New York, whose leading part in establishing the school system on its present basis will always be gratefully remembered:

"In most kinds of municipal service we all agree as to the desirable results and do not greatly differ as to the means of obtaining them. If a public servant efficiently extinguishes fires or cleans streets, or is thrifty in expending public money, nobody inquires about his creed or nationality, and some people are even willing to ignore his political opinions.

But with public education it is otherwise—men differ as to the object and differ widely as to the methods of education, and their differences, often based on race or religion, are tenaciously held. Teaching which suits a man of English descent may displease an Irishman or a Frenchman. The training which a Catholic desires for his children may be disliked by a Presbyterian or a Jew. It is only in very modern times that an unsectarian school system has been generally considered possible or desirable.

In New York city, before 1893, the central educational authority was weak, and the schools of each ward were governed by a board of five trustees. In the selection of these small boards, it was generally believed that religious and racial questions were considered. In one ward the Irish Catholics were said to control, in another the Germans, in a third it was reputed that Jews and Methodists had united, and that only a Methodist or a Jew could be appointed a teacher. Everywhere there were dissatisfied and distrustful parents. The schools were criticized as narrow and partial, and were often suspected of proselyting the children who attended them.

The present system of school control was established in an act framed by a commission to revise the School law, which Mayor Gilroy appointed, and of which the late E. Ellery Anderson was chairman.

No question was more debated by the commission than the proper size of the Board of Education. The administrative advantages of a small board were obvious, but it was decided that the commissioners of education should be so numerous that no nationality or church or educational clique could control, or, what is almost as important, could seem to control the schools. It was thought that a board of twenty-one members might be made so far representative of our cosmopolitan community that its action would be generally accepted as unprejudiced and fair. Among the many benefits which came from that revision of the School law, not the least has been the diminution of sectarian anxiety about public education.

When the schools of Manhattan were consolidated with those of the other boroughs, twenty-four members were added to the Board of Education. Every one saw that a board of forty-five members was likely to be unwieldy and inefficient, but there were commissioners who wished to retain office and localities which claimed a place on the board.

Many people then thought and now think a board of twenty-one large enough for the greater city, but the present danger seems to be that the number of the board will be made inadequate rather than excessive.

In recent discussion the argument against a paid Board of Education has been set forth with skill and authority, but it should not be forgotten that, apart from the reasons why commissioners should not be paid, there are cogent reasons why the board should not be too small.

As has been pointed out, the Board of Education is not required to manage the schools. All schools should be managed by experts. Public schools must be managed in accordance with the wishes of the community. It is the function of the Board of Education to interpret to the expert the wishes of the people and to the people the work of the expert. Such a board should not be disdainful of pedagogic science; it should possess the confidence of the people and should understand and sympathize with the conflicting beliefs, traditions, and prejudices which influence public opinion. No single commissioner will have all these qualifications, but every commissioner may have a part of them, and when each important body of opinion is faithfully represented on the board its compromises and conclusions are likely to be accepted by the public."

XUM

College Presidents

The past few months seem to have inaugurated an open season for college presidents. Lively scrimmages and upheavals have been in progress at various colleges and universities thruout the country, and a number of academic casualties are already recorded. It is understood that more are likely to follow. A number of institutions affected are, in the language of an observer of a philological turn of mind, being "trusteed to death."

High Schools and Colleges

Almost every educational meeting nowadays produces one or more attacks upon the colleges because they will not turn over their courses of study to the high schools and because they will not put bookkeeping and blacksmithing on a par with Latin and mathematics in their scheme of educational values. Many of the spokesmen for the high schools make themselves very ridiculous by assuming that every sort and kind of study which either local opinion or local politics compels them to accept in their program must also be forced upon the colleges as an alternative in the scheme of requirements for admission. The vocational tendency in secondary education which was a long time in asserting itself, is now showing unmistakable signs of going to extremes. We have in the United States only the colleges, and by no means all of them, to support the ideal of a liberal education and to stand between our civilization and the unchallenged domination of semi-educated vocationalists.

Another error which representatives of high schools are very apt to fall into is the supposition that all their graduates ought to be accepted by the colleges. Not more than one-fourth at the outside of the high school graduates of the country are likely to be benefited by a college education. Those who are not prepared to take a genuine college education and to profit by it ought to go at once into practical life or into a professional school of technology after the door of the high school closes behind them.

XUM

Deutsche Volksbildungsarbeit

We are the object of envy in Europe because of the munificent gifts of individuals to our educational and philanthropic institutions. But there is something equally inspiring in movements that, with limited financial support, achieve great and lasting benefits. The story of such an undertaking is told in a little pamphlet entitled *Deutsche Volksbildungsarbeit* (Berlin, 1911, edited by J. Tews). It portrays the activities of a volunteer society that with paltry sums at its disposal has directed its energies for the past forty years to promote the intellectual welfare of the German common people (*das Volk*) beyond the period of school life. Its aim has been advancement of civic and social efficiency; it has employed to this end frequent public discussions of educational questions; it has established and maintained continuation schools; it has created a system of circulating, or rather traveling, libraries. The contents of these libraries it supervises jealously, to instil a taste for wholesome literature and to counteract the evil tendencies of trashy and sensational literature. It has recently undertaken, and this is becoming one of its most important tasks, the dissemination of valuable and interesting information of a popular scientific character by a system of lecture courses. At the disposal of its group of Lyceum speakers (*Wanderredner*) it places its extensive lecture equipment of lanterns, lantern-slides, and cinematographs. During the whole period of its activity this society has never swerved from its strictly educational purpose. It has cooperated with members of the teaching profession, among which it has found its stanchest supporters, but it has never abandoned its independent policy of supplementing the work of the elementary school whenever and wherever it could apply its resources fruitfully.